Quick Fixes or Real Remedies? The Benefits and Limitations of Climate and Energy Fast Policy

MELISSA POWERS*
EDWARD JEWELL**
JONI SLIGER***

TABLE OF CONTENTS

 Jeffrey Bain Faculty Scholar and Professor of Law, Faculty Director of the Green Energy Institute, Lewis & Clark Law School. Many thanks to the faculty members at Cardozo Law School, who provided very helpful remarks regarding an earlier draft of this Article. Thanks also to Joni and Ed for all of your excellent work.

 Edward Jewell, Green Energy Institute, Energy Fellow 2016-17; Lewis & Clark School of Law, LL.M, magna cum laude, 2017; Lewis & Clark School of Law, J.D., cum laude, 2016.

 Joni Sliger, Green Energy Institute, Energy Fellow 2016-17; Lewis & Clark School of Law, LL.M., summa cum laude, 2017; Lewis & Clark School of Law, J.D., cum laude, 2016.

I. INTRODUCTION

Climate change has become an increasingly urgent crisis. The rapidly warming climate has already produced impacts that scientists had not expected for years to come.[1] While policymakers may once have thought

1. Eric Holthaus, *The Point of No Return: Climate Change Nightmares Are Already Here*, ROLLING STONE (Aug. 5, 2015), http://www.rollingstone.com/politics/news/the-point-of-no-return-climate-change-nightmares-are-already-here-20150805 [https://perma.cc/5XWW-6JQ8]; Ian Johnston, *Climate Scientists Expected 'Nothing Like' This Year's Record-Breaking Global Temperatures*, INDEPENDENT (July 27, 2016), http://www.independent.co.uk/environment/climate-change-global-warming-record-temperatures-nothing-like-shocked-2016-a7157891.html [https://perma.cc/9ELX-24NE]; Joanna Lawrence, *The Sea Level Is Rising Faster Than Expected in Some Parts of the United States, Especially in the Northeast*, NAT'L SCI. NEWS (Jan. 21, 2017), http://naturalsciencenews.com/2017/01/21/the-sea-level-is-rising-faster-than-expected-in-some-parts-of-the-united-states-especially-in-the-northeast/ [https://perma.cc/6YES-378G]; Lauren Morello, *Polar Ice Sheets Melting Faster Than Predicted*, CLIMATE WIRE (Mar. 9, 2011), http://www.eenews.net/climatewire/

humanity could wait decades to substantially reduce global anthropogenic greenhouse gas emissions, scientific studies now underscore the necessity of immediate emissions peaks followed by deep drops over the next two to three decades.[2] Multiple studies advocate for solutions that involve some form of rapid decarbonization,[3] a transition to a carbon-free energy system,[4] or "carbon-negative" strategies to remove carbon dioxide and other long-lived greenhouse gases from the atmosphere.[5] Although scientists may disagree about which solutions will be most effective, the consensus view is that climate change requires immediate transformative action.

In an attempt to respond to the scientific urgency, many governments around the globe have enacted a range of policies and strategies to mitigate climate change and transition away from fossil fuels. Parties to the Paris Agreement have committed to Nationally Determined Contributions (NDCs)

---

stories/1059946187 [https://perma.cc/THR8-U87D], *reprinted in* Lauren Morello, *Polar Ice Sheets Melting Faster Than Predicted*, SCI. AM. (Mar. 9, 2011), https://www.scientificamerican.com/article/polar-ice-sheets-melting-faster-than-predicted/ [https://perma.cc/2PD2-KG5Z]; Anne C. Mulkern, *Northern Hemisphere Snowpack Likely to Shrink Faster Than Previously Thought—Study*, CLIMATE WIRE (Nov. 13, 2012), http://www.eenews.net/climatewire/stories/1059972412 [https://perma.cc/C23K-XBDN], *reprinted in* Anne C. Mulkern, *Northern Hemisphere Snowpack Likely to Shrink Faster*, SCI. AM. (Nov. 13, 2012), https://www.scientificamerican.com/article/northern-hemisphere-snowpack-likely-to-shrink-faster/ [https://perma.cc/YSJ4-STL9]; Zoe Tabary, *Scientists Caught Off-Guard by Record Temperatures Linked to Climate Change*, THOMSON REUTERS FOUND. NEWS (July 26, 2016), http://news.trust.org/item/20160726133558-a7f25/ [https://perma.cc/3PGY-MQUQ]; *see, e.g.*, Niina Heikkinen, *Scientists Warn That Warming's Effects on Oceans are 'More Severe' Than Predicted*, CLIMATEWIRE (July 7, 2015), http://www.eenews.net/climatewire/stories/1060021345 [https://perma.cc/22WZ-J9FP].

2. *See infra* Part II.

3. *Pathways to deep decarbonization: 2015 report*, SUSTAINABLE DEV. SOLUTIONS NETWORK (Dec. 2015), http://deepdecarbonization.org/wp-content/uploads/2016/03/DDPP_2015_REPORT.pdf [https://perma.cc/6H4N-6F6H] (noting that United Nations Secretary-General Ban Ki-moon commissioned SDSN to "mobilize scientific and technical expertise from academia, civil society, and the private sector to support practical problem solving for sustainable development at local, national, and global scales."); *id.*

4. Mark Z. Jacobson et al., *100% Clean and Renewable Wind, Water, and Sunlight (WWS) All-Sector Energy Roadmaps for the 50 United States*, 8 ENERGY & ENVTL. SCI. 2093 (2015), http://web.stanford.edu/group/efmh/jacobson/Articles/I/USStatesWWS.pdf [https://perma.cc/HSS7-URM3].

5. James Hansen et al., Young People's Burden: Requirement of Negative CO_2 Emissions (Oct. 4, 2016) (unpublished manuscript), http://www.earth-syst-dynam-discuss.net/esd-2016-42/esd-2016-42.pdf [https://perma.cc/529D-YRWG]; Klaus S. Lackner et al., *The Urgency of the Development of CO_2 Capture from Ambient Air*, 109 PROC. NAT'L ACAD. SCI. 13156 (Aug. 14, 2012), http://www.pnas.org/content/109/33/13156.full.pdf [https://perma.cc/SL8M-VAK2].

to limit greenhouse gas emissions from 2020 through 2030.[6] While their NDCs will not, at this point, ensure attainment of the Paris Agreement's 2°C goal[7]—and truth be told, the goal is a political compromise that does not reflect current scientific understanding about the havoc that much warming will likely wreak on the planet[8]—global efforts to mitigate climate change will likely accelerate due to the Paris Agreement's framework.

While the collective actions are currently insufficient to maintain a stable climate, some nations have undertaken far more aggressive actions to reduce greenhouse gas emissions and their use of fossil fuels, breaking a trail for others to follow. Countries like Denmark and Sweden have announced goals to fully transition their energy systems away from fossil fuels by 2050 and to lower greenhouse gas emissions by at least 80% below 1990 levels by the middle of the century.[9] While the United States set a much weaker goal under the Obama Administration[10]—and, under the Trump Administration, commitment to the Paris Agreement specifically

---

6. Paris Agreement, art. 4, *opened for signature* (Apr. 22, 2016), http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf [https://perma.cc/5B4U-HQJE] (entered into force Nov. 4, 2016); *see also NDC Registry*, U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/focus/ndc_registry/items/9433.php [https://perma.cc/9489-PFBP] (last visited Apr. 15, 2017).

7. Joeri Rogelj et al., *Paris Agreement Climate Proposals Need a Boost to Keep Warming Well Below 2 °C*, 534 NATURE 631 (2016), http://www.nature.com/nature/journal/v534/n7609/full/nature18307.html [https://perma.cc/6P9G-CQ3Y]; *see also* UNFCCC Secretariat, *Synthesis Report on the Aggregate Effect of the Intended Nationally Determined Contributions*, ¶ 40, U.N. Doc. FCCC/CP/2015/7 (Oct. 30, 2015), http://unfccc.int/resource/docs/2015/cop21/eng/07.pdf [https://perma.cc/L7AB-9K54] ("[M]uch greater emission reductions effort than those associated with the INDCs will be required in the period after 2025 and 2030 to hold the temperature rise below 2 °C above pre-industrial levels.").

8. Seth Borenstein et al., *Odd Climate Math: The Difference Between 2 Degree and 1.5 Degree Goal Much Bigger Than 0.5*, U.S. NEWS (Dec. 4, 2015), http://www.usnews.com/news/business/articles/2015/12/04/matter-of-degree-temperature-goal-in-climate-talks-an-issue [https://perma.cc/Z4CM-AWAQ] (discussing the political negotiations surrounding the adoption of a goal); Reto Knutti et al., *A Scientific Critique of the Two-Degree Climate Change Target*, 9 NATURE GEOSCIENCE 13 (2016), http://www.nature.com/ngeo/journal/v9/n1/full/ngeo2595.html [https://perma.cc/MNL2-EPDA].

9. *Our Future Energy*, DANISH GOV'T 3 (2011), https://stateofgreen.com/files/download/387 [https://perma.cc/3PTE-W7LX]; Chloe Farand, *Sweden Pledges to Cut All Greenhouse Gas Emissions by 2045*, INDEPENDENT (Feb. 4, 2017), http://www.independent.co.uk/news/science/sweden-pledges-greenhouse-gas-emissions-zero-2045-paris-agreement-a7561111.html [https://perma.cc/VXA7-NDYX].

10. *Nationally Determined Contribution: U.S.*, U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE (Mar. 9, 2016), http://www4.unfccc.int/ndcregistry/PublishedDocuments/United%20States%20of%20America%20First/U.S.A.%20First%20NDC%20Submission.pdf [https://perma.cc/2ZNQ-YQ5W] ("[T]he United States intends to achieve an economy-wide target of reducing its greenhouse gas emissions by 26-28 per cent below its 2005 level in 2025 and to make best efforts to reduce its emissions by 28%.").

and action on climate change in general is very much in jeopardy[11]—on the sub-national level, many states continue to push aggressively to achieve ambitious climate and clean energy goals.[12] States have pursued a range of policies to reduce greenhouse gas emissions from specific sectors including the electricity, industrial, building, and transportation sectors.[13] Several states have dozens of climate and energy policies,[14] signaling the willingness of states to act.

This willingness to act, however, does not necessarily correspond to effective action. Indeed, despite the proliferation of climate and energy policies across the United States, greenhouse gas emissions have not dramatically fallen,[15] including in many states with seemingly robust climate and energy policies. Oregon, a state known as a climate leader, provides a clear illustration of this dynamic. Oregon has enacted dozens of laws to reduce greenhouse gas emissions, including a statewide greenhouse gas emissions goal, multiple emissions standards aimed at reducing greenhouse gas releases from fossil fuels, a Renewable Portfolio Standard (RPS) that requires the state's large utilities to obtain at least 50% of their electricity from renewable resources by 2040, one of the leading energy efficiency programs in the country, and a range of state subsidies and tax incentives to promote renewable energy

11. Coral Davenport, *Diplomats Confront New Threat to Paris Climate Pact: Donald Trump*, N.Y. TIMES (Nov. 18, 2016), https://www.nytimes.com/2016/11/19/us/politics/trump-climate-change.html?_r=0 [https://perma.cc/PS6G-KKC8].

12. *See e.g.*, Phuong Le, *Washington Governor says state won't be deterred on climate*, ASSOCIATED PRESS, http://www.kitsapsun.com/story/news/local/2017/01/26/washington-governor-says-state-wont-deterred-climate/97103928/ [https://perma.cc/39XS-X45N] (last updated Jan. 26, 2017) ("Washington Gov. Jay Inslee said Thursday the state will move forward with efforts to promote clean energy and tackle climate change despite 'foolishness' from President Donald Trump."); Ken Silverstein, *California Undercuts Trump's Inauguration With Aggressive Carbon Reduction Plan*, FORBES (Jan. 21, 2017), http://www.globaladvisors.biz/inc-feed/20170121/california-undercuts-trumps-inauguration-with-aggressive-carbon-reduction-plan/ [https://perma.cc/LN73-BPU5] ("By 2050, California hopes to have cut its greenhouse gas emissions by 80%.").

13. *See Database of State Incentives for Renewables and Efficiency*, DSIRE—N.C. CLEAN ENERGY TECH. CTR., http://www.dsireusa.org/ [https://perma.cc/82L7-WPLN] (last visited Apr. 18, 2017).

14. *Id.*

15. *U.S. Greenhouse Gas Inventory Report: 1990-2014*, U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014 [https://perma.cc/CG2L-VL6Y] (last visited Apr. 15, 2017) (noting that data since 2005 shows a general decrease, but this is largely attributable to the economic recession, not government action); *see, e.g.*, Kuishuang Feng et al., *Drivers of the US CO_2 Emissions 1997–2013*, 6 NATURE COMM. (2015), http://www.nature.com/articles/ncomms8714 [https://perma.cc/JJ7G-BNGH].

and energy conservation.[16] If the sheer number of laws a state has enacted were determinative of a state's actual climate and energy progress, Oregon should surely be in the lead. In reality, though, numerosity and effectiveness are distinct.

Despite twenty years of climate and energy policymaking, Oregon's most recent greenhouse gas emissions inventory shows that Oregon's greenhouse gas emissions will be nearly 11 million metric tons above the state's 2020 targets.[17] At first glance, this shortfall could trigger despair, as it would appear that meaningful progress on climate and clean energy eludes the state—despite its formidable effort, good intentions, and relatively favorable political landscape. However, such a conclusion is premature, for there is much that Oregon can do to learn from its efforts, build on its successes, and improve its approach going forward. Indeed, Oregon has a solid base of human and intellectual capital in civil society, within the administrative agencies, in local governments, and in the statehouse.[18] Additionally, many of the major political and economic actors in Oregon are at least open to the idea of a rapid transition to a clean energy economy.[19] The state has also demonstrated a longstanding willingness to enact climate and energy policies, some of which have proven quite effective.[20]

Nonetheless, the pressing scientific imperative of climate change compels a thorough and accurate examination of Oregon's political and legal shortcomings. Several climate and clean energy laws were poorly designed or have been undermined by loopholes.[21] Moreover, in some cases when potentially successful laws attracted media criticism, Oregon

16. *See infra* Part IV.

17. *Biennial Report to the Legislature*, OR. GLOBAL WARMING COMMISSION 8–9, 18 (2017), http://www.keeporegoncool.org/sites/default/files/ogwc-standard-documents/OGWC%202017%20Biennial%20Report%20to%20the%20Legislature_final.pdf [https://perma.cc/H3DR-W8NR].

18. *See, e.g.*, Steve Law, *Portland Wins International Award for Climate Change Efforts*, PORTLAND TRIB. (Dec. 6, 2016), http://portlandtribune.com/sl/334818-214670-portland-wins-international-award-for-climate-change-efforts [https://perma.cc/Y72Y-XDZD]; *Twelve States From Different Countries Sign to be Climate Leaders*, U.N. CLIMATE CHANGE NEWS ROOM (May 20, 2015), http://newsroom.unfccc.int/unfccc-newsroom/under-2-mou-a-subnational-global-climate-leadership/ [https://perma.cc/5E8R-N84M].

19. *See, e.g.*, *Oregon Companies Act On Climate*, CERES, https://www.ceres.org/declaration/act/company-actions-on-climate/oregon-companies-act-on-climate [https://perma.cc/REF6-F6XB] (last visited Apr. 15, 2017) (noting over 400 Oregon-based companies signed on to the Oregon Business Climate Declaration, a document stating that these business leaders support and promote the move to a clean energy economy); *see also Oregon Business Climate Declaration: Tackling climate change is one of Oregon's greatest economic opportunities of the 21st Century (and it's simply the right thing to do)*, CERES, https://www.ceres.org/declaration/images/oregon-climate-declaration [https://perma.cc/DUR2-Y6L5] (last visited Apr. 15, 2017) (providing a list of signatories of the Declaration).

20. *See infra* Part IV.

21. *Id.*

responded with reactionary repeals or temporary quick fixes that fail to cure the perceived flaws without compromising climate goals.[22] In short, Oregon has become a consumer of quick fix[23] and "fast policy" approaches to climate mitigation and energy decarbonization. Like fast food or fast fashion,[24] the speed and convenience of quick fixes and fast policy often come at the expense of quality.

According to Jamie Peck and Nik Theodore, "fast policy" refers to the accelerating rates of policy transfer around the globe "in which local policy experiments exist *in relation to* near and far relatives, to traveling models and technocratic designs, and to a host of financial, technical, social, and symbolic networks that invariably loop through centers of power and persuasion."[25] Although policy transfer is nothing new—governments have often modeled their own legislation off of their allies' successful policies—the term fast policy refers to the dynamic through which policies that embrace market-based programs have become increasingly mobile due to the work of influential international and national institutions that promote neoliberal solutions to many social problems.[26] Through a fast policy approach, a carefully tailored local policy will be discovered by international or national experts, endorsed as a universal model for other governments to apply, and thus disseminated to other subnational and local governments, without adequate consideration of the local factors that contributed to the prototype policy's success.[27] Governments on the receiving end of the expert institutions' advice then often embrace the newly sanctioned policy without the technical analysis and careful local tailoring that marked policy

22. *See, e.g.*, Ted Sickinger, *Oregon's Business Energy Tax Credit Is Officially Dead, But Its Liability Lives On*, OREGONIAN (July 1, 2014), http://www.oregonlive.com/business/index.ssf/2014/07/oregons_business_energy_tax_cr.html [https://perma.cc/U9WS-TQ42] (exemplifying a critical media perspective on a controversial but strong renewable energy incentive and celebrating the incentive's demise).

23. *Quick Fix*, MERRIAM-WEBSTER.COM, https://www.merriam-webster.com/dictionary/quick%20fix [https://perma.cc/7478-WEAJ] (last visited Apr. 15, 2017) (noting that a quick fix is "an expedient usually temporary or inadequate solution to a problem.").

24. For more on fast fashion, *see, e.g.*, Zhai Yun Tan, *What Happens When Fashion Becomes Fast, Disposable and Cheap?*, NAT'L PUB. RADIO (Apr. 10, 2016), http://www.npr.org/2016/04/08/473513620/what-happens-when-fashion-becomes-fast-disposable-and-cheap [https://perma.cc/VGR8-8VYN].

25. JAMIE PECK & NIK THEODORE, FAST POLICY: EXPERIMENTAL STATECRAFT AT THE THRESHOLDS OF NEOLIBERALISM xxxi (2015) (emphasis in original).

26. *Id.* at xxxi–xxxii.

27. *Id.*

transfers in the past.[28] Several factors contribute to the proliferation of fast policy, including expanded internet connectivity; increased cooperation between policy advocates; strategic messaging and analyses that often aim to support a chosen policy, rather than to evaluate *whether* a policy will perform as expected; and an institutional infrastructure that has become dependent upon externally selected "best practices" and model rules, as opposed to individually tailored solutions.[29] While fast policy approaches can provide governments with useful regulatory templates to follow, they can also produce flawed "solutions" to local problems.[30]

Climate change and energy policies have many of the markings of fast policy. A number of climate and energy laws and regulations employ market-based strategies, including emissions trading programs, carbon taxes, economic incentives to promote renewable energy development, and several compliance instrument trading mechanisms designed to add flexibility to regulatory mandates.[31] Of these programs, the increasing use of emissions trading exemplifies the fast policy approach. The theory behind emissions trading emerged in the United States in the 1960s and 1970s and became a major regulatory tool through the Clean Air Act's Acid Rain program of 1990.[32] Despite several programmatic shortcomings, advocates of emissions trading successfully promoted the strategy at the international level through the Kyoto Protocol's flexibility mechanisms.[33] Once enshrined in international law, emissions trading then became a favored policy in many domestic and regional climate mitigation programs.[34] Despite several problems with emissions trading in practice, climate policy experts continue to advocate for emissions trading, and local governments face continued pressure to enact their own emissions trading programs. Many other climate and energy regulations now also incorporate marketable compliance instruments into their regulatory framework.[35] Indeed, climate and energy policymaking often focuses on developing and incentivizing new markets, rather than on using governmental powers to create comprehensive strategies and infrastructure that will be necessary for decarbonization of the energy sector. Despite

---

28. *Id.*
29. *Id*. at 3–4.
30. *Id*. at 234–35 (discussing ways that policy models form and constrain local policy innovation); *id.* at 236 (discussing the importance of local cultivation of participatory budgeting and the ways in which fast policy discourages such local cultivation); *see also id.* chs. 2–8 (examining case studies of fast policy).
31. *See infra* Part III.B.
32. Holly Doremus & W. Michael Hanemann, *Of Babies and Bathwater: Why the Clean Air Act's Cooperative Federalism Framework is Useful for Addressing Global Warming*, 50 ARIZ. L. REV. 799, 801-802 (2008).
33. *Id.* at 804.
34. *Id.* at 803–04.
35. *See infra* Part III.B.

multiple implementation problems associated with market instruments, international and national experts continue to push for their inclusion at the state and local level. Fast policy has thus come to dominate climate and energy policy.

Oregon exemplifies a state that has embraced quick fixes and fast climate and energy policymaking.[36] For Oregon, policy imports have become increasingly common, particularly from California's expansive climate and energy policy framework, which itself includes many internationally sanctioned neoliberal policies.[37] As can often happen with fast policy, Oregon does not always tailor imported laws to local circumstances. At other times, however, Oregon adjusts imported laws to serve Oregon's unique political (not policy) framework, without conducting technical assessments of how these adjustments may weaken the laws' effectiveness.[38] In addition, because so many of Oregon's laws emerged from a fast policy network of advocates and politicians who have pre-determined preferences for specific policy models, the potential shortcomings of Oregon's climate and energy laws frequently go unexamined.[39] Since climate policy success often depends on underlying regulatory, economic, or physical factors, untailored or poorly tailored policy imports may fail to perform as expected.[40] As a consequence, despite dozens of state climate and energy laws, Oregon's greenhouse gas emissions trajectory continues to head in the wrong direction.

Oregon's climate and energy governance structure places the state at heightened risk for fast policy. Oregon has no designated agency charged with overseeing the state's climate and energy policy needs.[41] Instead, Oregon laws distribute policymaking responsibility among several agencies and rarely require effective collaboration or coordination between them. In addition, because Oregon's legislature meets only for a full session biannually with a one-month session in off years,[42] and lawmakers are poorly compensated,[43]

36. *See infra* Part IV.
37. *Id.*
38. *Id.*
39. *Id.*
40. *Id.*
41. *See id.*
42. OR. CONST. art. IV, § 10 (West, WestlawNext through 11/8/16 General Election) (limiting the length of full sessions to 160 calendar days and short sessions to 35, unless a two-thirds vote for a temporary extension passes both houses).
43. *2016 Survey: State Legislative Compensation, Session Per Diem and Mileage*, NAT'L CONF. ST. LEGIS. (2016), http://www.ncsl.org/Portals/1/Documents/legismgt/2016_Leg_Comp_Session_Per%20Diem_Mileage.pdf [https://perma.cc/PRA4-8PP9].

expertise within the legislature is difficult to develop and maintain. As a result, Oregon lawmakers rely heavily on external actors to advise and lobby for policies, rather than technical experts within the state government.

This policymaking approach—with diffuse responsibility for climate and energy governance and reliance on outside actors with narrow aims—presents particular risks in the complex and interdependent areas of climate and energy, where a discrete policy change can have unintended system-wide impacts. For example, policies that aim to reduce coal-based electricity, but fail to control new investments in natural gas-based power generation, risk creating new path dependencies as long-term investments are made in new infrastructure to support natural gas.[44] These policies also increase the likelihood that costs will become stranded—in which case ratepayers will face higher prices to pay off failed investments—or that policymakers will allow fossil resources to stay online for longer periods to avoid stranded costs.[45] As another example, policies that promote renewable energy development and deployment, but fail to adequately address utilities' unwillingness to buy renewable power, tend to promote boom and bust cycles in the renewable energy sector; this in turn adds risk and increases costs for renewable energy development.[46] Moreover, energy policies focused only on production and consumption, but not the infrastructure and rules related to transmission and transportation, leave huge regulatory gaps that undermine renewable energy growth.[47] Incomplete policies also drive up the political costs of climate mitigation and energy decarbonization, as each legislative session or regulatory action that seeks to add incrementally to an existing regulatory framework typically comes at some cost politically. As deals are made to get incremental policy proposals implemented, essential elements of the policies may be cut, either inadvertently or without a full understanding of the long-term implications.[48] Finally, to the extent any flaws in policy design are exposed, the political will to keep working toward effective climate mitigation and an energy transition can wane.[49] The urgency of climate change makes poor policy design increasingly unacceptable from an environmental and humanitarian perspective.

To avoid these shortcomings, this article recommends that Oregon and other states lacking meaningful climate mitigation and energy decarbonization strategies slow down their policymaking so that they can first develop a

---

44. *See*, *e.g.*, S.B. 1547, 78th Leg., Reg. Sess. (Or. 2016); *see also infra* Part IV.

45. *See infra* Part V; *see also* Emily Hammond & Jim Rossi, *Stranded Costs and Grid Decarbonization*, BROOK. L. REV. (forthcoming 2017), http://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=2486&context=faculty_publications [https://perma.cc/83ZH-L7YG].

46. *See infra* Part III.

47. *Id.*

48. *Id.*

49. *Id.*

long-term plan. These states should also ensure that their governance structures are in order. Specifically, states should ensure they have a governance system capable of designing, from the ground-up, a comprehensive strategy to decarbonize the energy system and substantially reduce greenhouse gases by the middle of the century.[50] An adequate governance structure would also ensure that regulatory and planning agencies have the expertise, independence, and capacity to evaluate existing laws, propose new ones, monitor implementation, and make adjustments where necessary to reflect changing conditions.[51] With a clear mission, adequate funding, and technical expertise, states can move out of the policy fast lane and into a pathway of strategic and effective policy design and implementation.

Part II of this Article briefly describes the current status of climate change to illustrate the urgency of effective solutions. Part III then introduces the basic concepts of fast policy, as described in Jamie Peck and Nik Theodore's book, *Fast Policy: Experimental Statecraft at the Threshold of Neoliberalism*. This Part then explains how climate and energy policy has many of the markings of fast policy. Part IV summarizes Oregon's attempts to address climate change through a wide array of policies and laws. This Part also examines the outcomes of Oregon's various programs, identifies fast policy shortcomings present in Oregon's programs, and explains why Oregon's reputation as a climate leader may not be warranted. Part V then uses Oregon's experience to explain the shortcomings, as well as some benefits, associated with fast climate and energy policy at the state level. Finally, Part VI concludes by recommending that states shift into a slower, yet steady pace to get out of the fast policy lane and chart a clear pathway to effectively address climate change and energy decarbonization.

50. *Id.*
51. *Id.*

II. THE URGENCY OF CLIMATE CHANGE

Atmospheric levels of CO_2 are at a level undetected within at least the last 800,000 years,[52] and possibly as many as 20 million years.[53] In 2016, the global average temperature was 1.1°C higher than the late 19th century mean.[54] Indeed, 2016 was the hottest year on record, and the third hottest year in a row.[55] Of the 17 hottest years ever recorded, 16 have occurred since 2000.[56] In 2011 and 2012, the number of intense heat waves was nearly triple the long-term average.[57] Temperature rise is merely one indicator among many that show the disruption that human activities—such as the combustion of fossil fuels—have had on the planet's natural systems.[58] The energy imbalance caused by the blanket of CO_2 and other greenhouse gases has led to impacts across every ecosystem on Earth and across every level of biological organization from genes to organisms to populations to species to communities to ecosystems.[59]

---

52. *See* Andrew Freedman, *The Last Time CO_2 Was This High, Humans Didn't Exist*, CLIMATE CENTRAL (May 3, 2013), http://www.climatecentral.org/news/the-last-time-co2-was-this-high-humans-didnt-exist-15938 [https://perma.cc/HA4G-PZNB] (noting that estimates range from 800,000 to 15 million years since CO2 levels in the atmosphere reached 400 ppm).

53. Brett R. Scheffers et al., *The Broad Footprint of Climate Change from Genes to Biomes to People*, SCIENCE 719, aa7671-1 (Nov. 11, 2016), http://science.sciencemag.org/content/354/6313/aaf7671 [https://perma.cc/QK5E-MPFE].

54. *NASA, NOAA Data Show 2016 Warmest Year on Record Globally*, NAT'L AERONAUTICS & SPACE ADMIN. (Jan. 17, 2016), https://www.giss.nasa.gov/research/news/20170118/ [https://perma.cc/CN5L-Q87J].

55. *Id.*; *see also History of Earth's surface temperature 1880-2016*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Jan. 17, 2017), https://www.climate.gov/news-features/videos/history-earths-surface-temperature-1880-2016 [https://perma.cc/J7NR-NNVK].

56. Jugal K. Patel, *How 2016 Became Earth's Hottest Year on Record*, N.Y. TIMES (Jan. 18, 2017), https://www.nytimes.com/interactive/2017/01/18/science/earth/2016-hottest-year-on-record.html?hp&action=click&pgtype=Homepage&clickSource=story-heading&module=first-column-region&region=top-news&WT.nav=top-news [https://perma.cc/LMG8-XT77].

57. *Id*. at 25 (noting that in 2011, many locations in Texas and Oklahoma experienced more than 100 days of temperatures over 100 degrees Fahrenheit); *see Climate Change Impacts in the United States: Highlights*, U.S. NAT'L CLIMATE ASSESSMENT 24 (2011), http://s3.amazonaws.com/nca2014/high/NCA3_Highlights_HighRes.pdf?download=1; *see also Risky Business: The Economic Risks of Climate Change in the United* States, RISKY BUS. 13 (June 2014), https://riskybusiness.org/site/assets/uploads/2015/09/RiskyBusiness_Report_WEB_09_08_14.pdf [https://perma.cc/H5BV-65PH] (noting that another way to put the increasing heat in context is to note that by 2100, Oregon, Washington, and Idaho could have more days above 95°F each year than are currently observed in Texas on an average year).

58. *See* Hansen et al., *Ice Melt, Sea Level Rise, and Superstorms: Evidence from Paleoclimate Data, Climate Modeling, and Modern Observations that 2°C Global Warming Could Be Dangerous*, 16 ATMOSPHERIC CHEMISTRY & PHYSICS 3761 (2016), http://www.atmos-chem-phys.net/16/3761/2016/ [https://perma.cc/Y4WV-VSJD].

59. Scheffers et al., *supra* note 53.

Higher temperatures are leading to rising sea levels.[60] Thermal expansion of water molecules caused by warmer global temperatures and ice melt from continental ice sheets combine to contribute to sea level rise.[61] Even if the global mean temperature is stabilized, sea levels are expected to continue to rise for centuries.[62] Paleoclimate data indicates that during the Eemian period, temperatures were only a few tenths of a degree warmer than today, yet sea levels rose to levels roughly 19.5 to 29.5 feet higher than current levels.[63]

In addition, the heightened concentrations of CO_2 in the atmosphere are altering the chemical composition of the oceans. Ocean surface waters are now 30% more acidic than they were 250 years ago.[64] The high acidity impairs the ability of marine organisms such as corals, krill, oysters, clams, and crabs to form shells and skeletons, and to otherwise survive and grow.[65] Marine organisms also face progressively lower oxygen levels as the chemical composition of the oceans changes, further imperiling species survival[66] and potentially affecting ocean food chains.

Sea level rise will dramatically impact coastal populations.[67] In the United States, the Southeast and the Atlantic coast face the greatest risks by rising ocean levels. Property losses alone, just from sea level rise, could cost between $66 billion and $106 billion by 2050 if emissions continue on their current path.[68] In Florida, where three-quarters of the state's population and four-fifths of the state's economy are based in coastal areas,[69] the shoreline is expected to move inland 500 to 2,000 feet.[70] Critical

60. *Synthesis Report Summary for Policymakers*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 4 (2014), https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-for-policymakers.pdf [https://perma.cc/Q546-GK8M] ("Over the period 1901 to 2010, global mean sea level rose by 0.19 [0.17 to 0.21] m . . . the rate of sea level rise since the mid-19th century has been larger than the mean rate during the previous two millennia (*high confidence*).").

61. *See* Hansen et al., *supra* note 58, at 3765.

62. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 60, at 13.

63. *See* Hansen et al., *supra* note 58, at 3800.

64. U.S. NAT'L CLIMATE ASSESSMENT, *supra* note 57, at 7.

65. *Id.*

66. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 60, at 13; *see also* U.S. NAT'L CLIMATE ASSESSMENT, *supra* note 57, at 58 (stating that more than 160 million Americans and growing live in coastal watershed counties).

67. *See* RISKY BUS., *supra* note 57, at 21.

68. *See id*. at 4.

69. Laura Parker, *Treading Water*, NAT'L GEOGRAPHIC (Feb. 2015), http://ngm.nationalgeographic.com/2015/02/climate-change-economics/parker-text [https://perma.cc/2DW9-YN2P].

70. *Id.*

infrastructure such as sewage treatment plants and nuclear power plants will be inundated with seawater,[71] while drinking water supplies will face saltwater intrusion.[72] Miami has spent over $300 million to overhaul the city's storm drainage system and buy pumps, gaining the city an expected two to three decades of preparation for sea level rise.[73] Up and down the Atlantic coast, sandy beaches will be inundated with ocean water, destroying natural beauty and economic value associated with tourism, recreation, fishing.[74]

Extreme weather events will likely increase in intensity and frequency as the Earth's energy imbalance increases.[75] The North Atlantic faces particular challenges as the mid-Atlantic warms and creates a larger water vapor repository and the Northern Atlantic cools due to ice melt. The increased temperature gradient provides more energy for severe weather events with higher winds and more precipitation.[76] Eighty-eight percent of the population of the Northeast lives in coastal counties, and 68% of the region's gross domestic product is generated in these counties.[77] Observations show that Atlantic hurricanes have already increased in intensity, frequency, and duration since the early 1980s, and Category 4 and 5 hurricanes have become more frequent.[78] In addition to supercharged hurricanes on the east coast, impacts to the water cycle are expected to cause more droughts and more episodes of flooding across the country. Today, 10% of U.S. counties are at high or extreme risk of water shortages.[79] By 2050, 32% of counties are expected to be at high or extreme risk of water shortages.[80] Meanwhile, flooding is expected to intensify in many U.S. regions, even where total precipitation is expected to decline.[81]

As temperatures rise, the risk of extinction increases and accelerates for species around the globe.[82] Other anthropogenic stressors such as habitat

---

71. *Id.*

72. *See id.* (explaining that saltwater intrusion into drinking waters is likely to be particularly problematic in south Florida due to its porous limestone subsurface, which will also undermine the efficacy of sea walls in preventing flooding because the inundation will seep up from below).

73. *Id.*

74. Okmyung Bin et al., *Impacts of Global Warming on North Carolina's Coastal Economy* (2007), http://bipartisanpolicy.org/wp-content/uploads/sites/default/files/NC%20Climate_0.pdf [https://perma.cc/7DBS-PLPV].

75. *See* Hansen et al., *supra* note 58, at 3779.

76. *Id.* at 3780.

77. RISKY BUS., *supra* note 57, at 21.

78. U.S. NAT'L CLIMATE ASSESSMENT, *supra* note 57, at 24.

79. *Id.* at 44.

80. *Id.*

81. *Id.*

82. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 60, at 13; *see also* Mark C. Urban, *Accelerating Extinction Risk from Climate Change*, 348 SCIENCE

encroachment and fragmentation have already combined with the effects of climate change to put species at heightened risk of extinction.[83] The scientific record indicates that previous eras of climate change at rates slower than present anthropogenic climate change resulted in significant ecosystem shifts and species extinctions.[84]

Climate-related human health impacts in the United States are already being observed.[85] Rising temperatures are expected to contribute to multiple negative impacts on air quality, including increased ground-level ozone concentrations and particulate matter emissions from more frequent and intense wildfires, worsening pre-existing health conditions and contributing to new ones.[86] Exposure to extreme weather events negatively impacts human physical and mental health in a multitude of ways. Heat waves increase heat stroke,[87] and flooding exposes populations to contaminated

---

571, 571 (May, 2015), science.sciencemag.org/content/348/6234/571.full [https://perma.cc/R4X5-EGNU] (examining 131 published studies on extinction in relation to climate change and arriving at the estimate that 7.9% of species are predicted to become extinct because of climate change, with an upper estimate of 16% of species if we continue on our business as usual emissions path).

83. Paul Opdam & Dirk Wascher, *Climate Change Meets Habitat Fragmentation: Linking Landscape and Biogeographical Scale Levels in Research and Conservation*, 117 BIOLOGICAL CONSERVATION 285 (2004), http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.508.7666&rep=rep1&type=pdf [https://perma.cc/QD5S-5GCM].

84. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 60, at 13.

85. Allison Crimmins et al., *The Impacts of Climate Change on Human Health in the United States: Executive Summary*, U.S. GLOBAL CHANGE RESOURCE PROGRAM 2 (2016), https://s3.amazonaws.com/climatehealth2016/high/ClimateHealth2016_ExecSummary_Standalone.pdf [https://perma.cc/35F7-CEPC] ("Already in the United States, we have observed climate-related increases in our exposure to elevated temperature; more frequent, severe, or longer-lasting extreme events; degraded air quality; diseases transmitted through food, water, and disease vectors (such as ticks and mosquitoes); and stresses to our mental health and well-being.").

86. Crimmins et al., *supra* note 85, at 9; *Ozone Pollution*, U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/ozone-pollution/ozone-basics#effects [https://perma.cc/HQ79-Z3SB] (last visited Feb. 7, 2017) (noting that ground-level ozone causes respiratory problems such as chest pain, coughing, throat irritation, airway inflammation, reduced lung function, and can damage lung tissue. Ground-level ozone also worsens pre-existing respiratory problems such as bronchitis, emphysema, and asthma); *Particular Matter (PM) Pollution: Health and Envtl. Effects of Particulate Matters*, U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm [https://perma.cc/3TRA-88KL] (last visited Apr. 14, 2017) (stating that Particulate matter aggravates asthma, decreases lung function, and causes irritation of the airways, coughing, or difficulty breathing, among other negative health effects).

87. Crimmins et al., *supra* note 85, at 5.

water, disrupts essential services, and increases the possibility of drowning.[88] Disease vectors such as ticks and mosquitoes are likely to expand range and be active for longer periods of the year in a climate change-impacted world.[89] Increased temperatures also increase threats from *Salmonella* in food.[90] Finally, mental health and well-being will suffer as traumatic events like natural disasters increase in severity and frequency.[91] While each of these health impacts of climate change poses its own unique risk, they are unlikely to occur independently of one another. Instead, it is more likely that exposure to multiple climate change threats will occur simultaneously, creating "compounding or cascading" health impacts.[92]

In addition, climate change will profoundly affect agriculture. The Midwest, Southeast, and lower Great Plains show particular vulnerability to extreme heat and face risk of losing 50-70% of their annual crop yields of corn, soy, cotton, and wheat absent agricultural adaptation.[93] In fact, the 2011 heat wave in Texas and Oklahoma resulted in more than $10 billion in direct losses in agriculture alone.[94] Weeds, disease, insect pests, and other stressors will also affect crop and livestock production.[95] Higher winter temperatures can also lead to early bud bloom for some perennial plants, which can result in frost damage when cold conditions occur in late spring.[96] Finally, water for irrigation will be in high demand at the same time that the water cycle is undergoing dramatic changes.[97]

Amongst challenges to the planet's natural systems, climate change will pose an immense challenge to the planet's political systems. The Department of Defense has recognized climate change as a top strategic risk to our national interests.[98] As President Obama noted, "all of these effects can

---

88. *Id.* at 5.
89. *Id.* at 5, 13.
90. *Id.* at 13.
91. *Id.* (noting that mental health impacts can include stress from disruption and financial ruin, feelings of helplessness, mental and physical fatigue from trying to rebuild and recoup losses); *see* Sandy Keenan, *Dark Water: A Year After Hurricane Sandy*, N.Y. TIMES (Oct. 2, 2013), http://www.nytimes.com/2013/10/03/garden/dark-water-a-year-after-hurricane-sandy.html [https://perma.cc/Z8S9-4VBT].
92. Crimmins et al., *supra* note 85, at 4.
93. RISKY BUS., *supra* note 57, at 5.
94. U.S. NAT'L CLIMATE ASSESSMENT, *supra* note 57, at 25.
95. *Id.* at 46.
96. *Id.*
97. *See id.* at 21, 43 (noting that water demands for irrigation will be particularly acute in arid areas such as the western United States, where 81% of consumptive uses of water go to irrigation of crops).
98. *National Security Strategy*, WHITE HOUSE 12 (2015), obamawhitehouse.archives.gov/sites/default/files/docs/2015_national_security_strategy_2.pdf [https://perma.cc/BBC6-EZMJ] ("Climate change is an urgent and growing threat to our national security, contributing to

lead to population migration within and across international borders, spur crises, and amplify or accelerate conflict in countries or regions already facing instability and fragility."[99] Climate change is thus a threat multiplier that exacerbates underlying social tension by creating conditions that further marginalize the vulnerable,[100] pushing tenable situations over the edge into unmanageable disorder.

III. FAST POLICY AND QUICK FIXES FOR CLIMATE AND ENERGY POLICY DESIGN

The growing urgency of climate change has spurred climate and energy policymaking at the international, national, and subnational levels. Since the early 1990s, governments have enacted an array of policies to mitigate climate change and promote a transition away from fossil-fueled energy production. Many of these policies embrace neoliberal approaches to regulation, either through direct and indirect mechanisms to place a price on carbon or through market-based tools that aim to increase flexibility and lower costs associated with regulatory compliance. To a large extent, the development of these policies has involved fast policy transfers. This section first describes the fast policy premise described by Peck and Theodore. It then explains the fast dynamics of climate and energy policymaking.

A. The Fast Policy Premise

For years, social scientists have studied the ways in which policies move between jurisdictions and within jurisdictions, both vertically and horizontally. In the United States, policy transfers have led to some of the nation's most well-known laws, including the Affordable Care Act[101]

---

increased natural disasters, refugee flows, and conflicts over basic resources like food and water.").

99. *Presidential Memorandum – Climate Change and National Security*, WHITE HOUSE (2016), https://obamawhitehouse.archives.gov/the-press-office/2016/09/21/presidential-memorandum-climate-change-and-national-security [https://perma.cc/HXH9-QAY3].

100. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 60, at 16 ("Climate change is projected to increase displacement of people . . . [and] [p]opulations that lack the resources for planned migration experience higher exposure to extreme weather events, particularly in developing countries with low income. Climate change can indirectly increase risks of violent conflicts by amplifying well-documented drivers of these conflicts such as poverty and economic shocks.").

101. Patient Protection and Affordable Care Act, 42 U.S.C.A. §§ 18001-18121 (West, WestlawNext through P.L. 115-22).

(or Obamacare), which was modeled in part off of Massachusetts' Romneycare,[102] and the Clean Air Act,[103] which was modeled in part off of California's air quality laws.[104] More than a century ago, the United States' model of electric utility regulation derived from a legal scheme that was crafted in New York, revised in Wisconsin, and then transferred to other states.[105] Policy transfers are thus an age-old and fundamental tool for importing and adapting successful laws to new jurisdictions.

Over the past few decades, however, policy transfers have increased in scale and speed, due in large part to the efforts of international and national networks of experts and funders, leading to a much faster policy distribution process.[106] This fast policy involves accelerating rates of policy transfer around the globe, "in which local policy experiments exist *in relation to* near and far relatives, to traveling models and technocratic designs, and to a host of financial, technical, social, and symbolic networks that invariably loop through centers of power and persuasion."[107] Fast policy thus typically involves 1) the initial development at the local level of an effective policy solution to a local problem, often over a period of years and with substantial policy adaptation in response to implementation challenges; 2) identification and endorsement by national or international experts of the local policy—particularly if it employs neoliberal strategies—as a model for other national and subnational governments to follow; 3) development by the experts of a set of "best practices" that policy adopters should use; 4) local adoption of the model policy and best practices, often without careful adaptation to local conditions; and 5) continued adherence by the network of experts to the policy model and best practices, even when they fail in practice.[108]

As policies have become increasingly mobile, the technical analysis and local tailoring that used to accompany policy transfers has diminished.[109] Local policymakers increasingly defer to the network of policy experts and advocates who use a top-down model to promote local adoption of

---

102. J.D. Kleinke, *The Conservative Case for Obamacare*, N.Y. TIMES (Sept. 30, 2012), http://www.nytimes.com/2012/09/30/opinion/sunday/why-obamacare-is-a-conservatives-dream.html [https://perma.cc/M8ZU-ZLLU].

103. Clean Air Act, 42 U.S.C.A. §§ 7401-7671 (West, WestlawNext through P.L. 115-22).

104. *See, e.g.*, Matthew L. Wald, *California's Pied Piper of Clean Air*, N.Y. TIMES (Sept. 13, 1992), http://www.nytimes.com/1992/09/13/business/california-s-pied-piper-of-clean-air.html?pagewanted=all [https://perma.cc/KX54-6D3F].

105. *See* RICHARD F. HIRSH, POWER LOSS: THE ORIGINS OF DEREGULATION AND RESTRUCTURING IN THE AMERICAN ELECTRIC UTILITY SYSTEM 12–15 (1999).

106. PECK & THEODORE, *supra* note 25, at xxxi.

107. *Id.*

108. *Id*. at xxxi–xxxii, 131–43.

109. *Id.* at xxxi–xxxii.

designated best practices to address seemingly common problems.[110] By relying on sanctioned model programs, local governments can attempt to address problems swiftly through programs their proponents argue are proven to work. While these sanctioned programs can succeed, the absence of thoughtful tailoring can make fast policy ill-suited to complex and unique local circumstances.[111]

According to Peck and Theodore, fast policy propagates despite a lack of empirical evidence of success, and even when policy models fail. For example, *Fast Policy* explores the use of conditional cash transfers (CCTs)—aid programs in which payments are conditioned on poor families fulfilling certain tasks, such as meeting school attendance and health screening requirements.[112] *Fast Policy* examines New York City's embrace of the CCT aid model, which originated and succeeded in Mexico after about a decade of field testing, monitoring, and fine-tuning.[113] Based on the ultimate success in Mexico, and encouraged by the World Bank and charitable foundations, New York City then imported CCTs into its own aid system.[114] However, in the process of the policy transference, New York made its own CCT program increasingly complex, without any initial analysis of how the revised CCT model would perform.[115] Ultimately, the New York experience failed.[116] Yet, despite this failure, other governments, encouraged by the World Bank, continue to adopt CCTs modeled off of New York's program.[117] Indeed, even as CCTs have achieved "unruly" outcomes "in the wild," their proponents continue to advocate for their adoption.[118]

The authors attribute the ongoing commitment to CCTs—and most fast policies—to an enduring global commitment to neoliberal, or market-based, programs to address a range of problems.[119] CCTs turn direct aid

110. *Id.* at 3–4.
111. *Id.* at 234–35 (discussing ways that policy models form and constrain local policy innovation); *id.* at 236 (discussing the importance of local cultivation of participatory budgeting and the ways in which fast policy discourages such local cultivation); *see also id.* at chs. 2–8 (examining case studies of fast policy).
112. *Id.* at 46.
113. *Id.* at 65–72.
114. *Id.* at 45–65.
115. *Id.*
116. *Id.* at 79–83 (noting that New York had "reconstructed the model to suit local circumstances, but made the mistake of overelaborating the imported model and rushing its implementation.").
117. *Id.* at 83–84.
118. *Id.* at 131.
119. *Id.* at 131–43.

(money-for-nothing) into a money-for-something exchange that requires performance by the poor.[120] This appeals to the neoliberal resistance to pure welfare and reaffirms the corollary belief that poverty results from bad behavior, rather than misfortune and circumstance.[121] Because CCTs align so well with neoliberal views, they remain popular policies notwithstanding a substantial record of failure.[122] CCT proponents are quick to dismiss any failures as ongoing experimentation, while advertising the overarching policy approach as fundamentally sound.[123] The tendency to value orthodoxy above empiricism enables fast policy to spread.[124] As the next section argues, this is particularly true in the accelerating world of fast climate and energy policy.

B. Fast Climate and Energy Policy

Fast policy and quick fixes are increasingly common in the fields of climate and energy law. In particular, climate and energy policies that embrace market mechanisms to reduce greenhouse gas emissions and scale up renewable resources have the markings of fast policy. Although debates rage between which market mechanisms perform best, exemplified by the ongoing contest between carbon tax and emissions trading,[125] the policies are ultimately vying for the top fast policy slot. Lost in the debate, however, are empirical experiences about how the policies have in fact performed and deeper examinations of whether other tailored policies might achieve better outcomes.[126] Fast policy has come to dominate climate and energy policy on a global and national level.

Greenhouse gas emissions trading programs exemplify the rise of fast climate policy. As Professors Holly Doremus and W. Michael Hanemann explain, economists began promoting emissions trading in the 1960s and 1970s as a theoretically superior solution to direct environmental regulation.[127] Under a typical emissions trading system, regulators cap the total allowable

---

120. *Id.* at 134, 139.
121. *Id.* at 135.
122. *Id.*
123. *Id.* at 139–40.
124. *Id.* at 141–42.
125. These policies are discussed further below, but for more on the debate, *see generally Putting a Price on Carbon: An Emissions Cap or a Tax?*, YALE ENV'T 360 (May 7, 2009), http://e360.yale.edu/features/putting_a_price_on_carbon_an_emissions_cap_or_a_tax [https://perma.cc/65TT-FNGG] (providing several experts' arguments for one mechanism or the other).
126. *See id.* (noting that some cite the mere existence of trading schemes as proof that they work, but the discussion rarely if ever delves beneath the surface to assess how well a particular mechanism works).
127. Doremus & Hanemann, *supra* note 32, at 801.

amount of pollution, allocate emissions allowances to entities regulated under the cap, and allow the regulated entities to buy and sell emissions allowances as necessary.[128] Economists believe that emissions trading enables more cost-effective reductions and promotes innovation, at lower administrative expense.[129] Captivated by the promises of emissions trading, in the 1970s and 1980s, regulators began to incorporate emissions trading concepts into existing regulatory programs.[130] In 1990, Congress then fully embraced emissions trading when it enacted the Clean Air Act's Acid Rain Program, which uses emissions trading to reduce sulfur dioxide emissions.[131] When sulfur dioxide emissions then decreased—although not necessarily because of emissions trading[132]—emissions trading became a key component of U.S. environmental law. Today, nearly every environmental program developed by the Environmental Protection Agency includes "some form of environmental trading."[133]

Emissions trading then quickly spread to greenhouse gas emissions programs at the international and domestic levels.[134] Indeed, emissions trading seemed particularly suited for greenhouse gases due to their fungible nature and negligible direct effects on the local environmental and human health.[135] The theoretical benefits of emissions trading soon became orthodoxy, notwithstanding the increasing numbers of empirical analyses and countervailing theoretical arguments indicating that emissions trading suffered from several shortcomings, including weak caps and allowance overallocations,[136] complex administration,[137] disincentives for technological innovation,[138] potential

128. *Id.* at 807–09.
129. *Id.* at 802, 810.
130. *Id.* at 802.
131. *Id.*
132. *E.g.*, Curtis A. Moore, *The 1990 Clean Air Act Amendments: Failing the Acid Test*, 34 ENVTL. L. REP. 10366, 10379 (2004).
133. Doremus & Hanemann, *supra* note 32, at 802–03 (quoting David M. Driesen, *Trading and Its Limits*, 14 PENN. ST. ENVTL. L. REV. 169 (2006)).
134. Doremus & Hanemann, *supra* note 32, at 804.
135. *Id.* at 803.
136. *See, e.g.*, Lesley K. McAllister, *Beyond Playing "Banker": The Role of the Regulatory Agency in Emissions Trading*, 59 ADMIN. L. REV. 269, 276 n.37, 312 (2007).
137. *Id.* at 304.
138. Doremus & Hanemann, *supra* note 32, at 810; *see also* David M. Driesen, *Is Emissions Trading an Economic Incentive Program?: Replacing the Command and Control/Economic Incentive Dichotomy*, 55 WASH. & LEE L. REV. 289, 325–27 (1998).

exacerbation of environmental injustice,[139] and market volatility.[140] Despite the warnings coming from early emissions trading experiences, governments continued to support emissions trading, with California playing a prominent domestic role in becoming the first state to create its own economy-wide emissions trading program for greenhouse gases.[141] To date, California's program has experienced several of the problems emissions trading skeptics had foretold.[142] These include emissions overallocation, market uncertainty, exacerbated environmental injustice, and price volatility.[143] Recent analyses show that actual greenhouse gas emissions reductions in California have resulted from other California regulatory programs, and not from emissions trading.[144] Despite these facts-on-the-ground, however, other states—including Oregon—continue to march onward in the direction of adopting their own emissions trading programs modeled off of California's.[145] Emissions trading has, in short, become the quickest of the fast policies, although others have begun to catch up.

In particular, carbon taxes are frequently touted as the superior option to emissions trading programs.[146] Whereas emissions trading places an indirect price on greenhouse gas emissions, carbon taxes directly charge consumers or producers of carbon-intensive products for their emissions.[147] Carbon taxes seek to internalize the costs of pollution that are otherwise externalized,

---

139. Doremus & Hanemann, *supra* note 32, at 803; *see also* Alice Kaswan, *Environmental Justice and Domestic Climate Change Policy*, 38 ENVTL. L. REP. 10287, 10293–94 (2008).

140. *See, e.g.*, Steven Ferrey, *Auctioning the Building Blocks of Life: Carbon Auction, the Law, and Global Warming*, 23 NOTRE DAME J. L., ETHICS & PUB. POL'Y 317, 349, 373–74 (2009) (discussing trading and price volatility).

141. A.B. 32, 2006 Leg., Reg. Sess. (Cal. 2006).

142. *See* Debra Kahn, *Calif. Carbon Offsets Face Slowdown in Market Development*, CLIMATE WIRE (Oct. 14, 2015), http://www.eenews.net/climatewire/stories/1060026292 [https://perma.cc/3H94-XJPU] (discussing price volatility and market uncertainty); Lesley McAllister, *Auction Results in California Cap and Trade*, ENVTL. L. PROFESSOR BLOG (May 21, 2013), http://lawprofessors.typepad.com/environmental_law/2013/05/auction-results-in-california-cap-and-trade-.html [https://perma.cc/manage/create] (discussing over allocation); Alan Ramo, *The California Offset Game: Who Wins and Who Loses?*, 20 HASTINGS W.-NW. J. ENVTL. L. & POL'Y 109, 122, 133–43 (2014) (discussing environmental justice issues and litigation against the California system).

143. *See* McAllister, *supra* note 142; Ramo, *supra* note 142, at 122.

144. *See* Debra Kahn, *Taking the Economic Temperature 10 Years After A.B. 32*, CLIMATE WIRE (Sept. 22, 2016), http://www.eenews.net/stories/1060043254/print [https://perma.cc/3GJG-FCGZ] (discussing economists' reports).

145. *See, e.g.*, Elizabeth Harball, *Ore. To Consider Cap-and-Trade Systems*, CLIMATEWIRE (May 17, 2016), http://www.eenews.net/climatewire/stories/1060037348/search?keyword=oregon+california+trading+system [https://perma.cc/JQM9-M89Q] (discussing Oregon's consideration of the California model).

146. *See, e.g.*, YALE ENV'T 360, *supra* note 125.

147. *See generally* Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 HARV. ENVTL. L. REV. 499, 513–14 (2009).

and thereby correct the profound market failures in the fossil fuel sectors.[148] Carbon taxes also send price signals to market participants to reduce their use of carbon-intensive products and increase their use of carbon-free ones.[149] Whether market participants actually hear these signals depends on the stringency and structure of the tax.[150] Moreover, even if the signal is received, there is no guarantee that behaviors will or even can change in response. In other words, the success of a carbon tax hinges on both the design of the tax system and multiple exogenous factors.[151] Nonetheless, carbon taxation has also become a silver bullet, fast policy solution.

Renewable energy policies have also become increasingly fast. For example, RPS policies, which have become one of the most ubiquitous policies supporting renewable energy deployment and are likely the most important drivers of renewable energy development in the United States,[152] routinely include tradable compliance credits that have the markings of fast policy design. Iowa was the first state to enact an RPS,[153] but other states quickly followed, importing and adjusting Iowa's program to include marketable compliance credits. Specifically, states began to add market-based renewable energy credit (REC) programs to allow regulated utilities and renewable producers to buy and sell RECs separately from the renewable electricity itself.[154] States then further tailored REC programs to allow carve-outs, multipliers, banking, and borrowing.[155] While these rules were developed to support increased renewable energy development, production, and sales, many REC rules have actually suppressed renewable energy development

148. *Id.* at 500, 512.
149. *Id.* at 500, 523.
150. *Id.* at 523.
151. *See id.* (discussing design flaws of current carbon taxes and proposing changes for future ones).
152. *See, e.g.*, Jocelyn Durkay, *State Renewable Portfolio Standards and Goals*, NAT'L CONF. ST. LEGIS. (Dec. 28, 2016), http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx [https://perma.cc/5KNF-ZSX3] (showing numerous states have adopted RPSs).
153. *Id.*
154. *See Special Report: Renewable Energy Certificates*, PLATTS (Apr. 2012), http://www.platts.com/im.platts.content/insightanalysis/industrysolutionpapers/recspecialreport1112.pdf [https://perma.cc/KX89-N5CM] (noting the conceptualization of RECs in 1990 (after Iowa adopted its standard)).
155. Warren Leon, *Clean Energy States Alliance, The State of State Renewable Portfolio Standards*, CLEAN ENERGY STATES ALLIANCE 10 (June 2013), http://www.cesa.org/assets/2013-Files/RPS/State-of-State-RPSs-Report-Final-June-2013.pdf [https://perma.cc/KP4Z-UHL6] (discussing multipliers and carve-outs); Richard Schmalensee, *Evaluating Policies to Increase Electricity Generation from Renewable Energy*, 6 Rev. ENVTL. ECON. & POL'Y 45, 56 (2012) (discussing REC banking in various states).

or injected uncertainty into the market. For example, carve-outs can create separate markets for specific resources that need additional support, but suppress demand once the carve-out amount has been fulfilled.[156] Multipliers, which reward additional RECs for specific resources, accelerate attainment with the RPS and can cause rapid market saturation, which ultimately suppresses demand.[157] Finally, banking, which allows utilities to store surplus RECs for future use, can likewise suppress future demand for renewable electricity.[158] Despite the unintended consequences of these market-oriented rules, states continue to include them in their RPSs, consistent with the fast policy process of following the leader and ignoring empirical results.

Ongoing debates regarding feed-in tariffs and net metering further exemplify the risks of fast policy in the energy sector. Although feed-in tariffs—which guarantee renewable energy producers fixed prices and long-term contracts for renewable power—have created "turmoil" in other countries,[159] they continue to be a policy of choice in energy policy circles. Net metering also remains a popular policy tool, even though controversies regarding net metering illustrate how careless policy adoption can wreak havoc on renewable energy programs. Net metering allows utility customers who generate renewable energy to apply the amount they generate against the amount they consume from the grid, providing users significant savings on their electric bill.[160] Public utility commissions developed the first net metering programs, and by 1995, only two states had enacted legislation requiring net metering.[161] But net metering quickly spread after 1995, leading Congress in 2005 to require electric utilities to offer net metering by 2007.[162] With its rise, net metering has been at the center of a number of recent controversial rulemakings, in which some public utility commissions

156. Warren Leon, *Clean Energy States Alliance, Designing the Right RPS: A Guide to Selecting Goals and Program Options for a Renewable Portfolio Standard*, CLEAN ENERGY STATES ALLIANCE 40–41 (2012), http://cesa.org/assets/2012-Files/RPS/CESA-RPS-Goals-and-Program-Design-Report-March-2012.pdf [https://perma.cc/YX52-29AF] (discussing the pros and cons of a carve-out).

157. *Id.* at 41–42 (noting one con of a credit multiplier is that it decreases the overall amount of renewable energy that an RPS brings online).

158. *See infra* Part IV.A.2.b (discussing Oregon's problems with indefinite banking).

159. *See* Lincoln L. Davies & Kirsten Allen, *Feed-in Tariffs in Turmoil*, 116 W. VA. L. REV. 937 (2014).

160. *See* Melissa Powers et al., *Countdown to 2050: Sharpening Oregon's Climate Action Tools*, GREEN ENERGY INST. 30 (Nov. 2015), https://law.lclark.edu/live/files/23144-countdown-to-2050-report [https://perma.cc/9DTH-N2LS] (discussing Oregon's few transportation policies).

161. Yih-Huei Wan, *Net Metering Programs*, NATIONAL RENEWABLE ENERGY LABORATORY, TOPICAL ISSUES BRIEF 1–2 (1996).

162. Energy Policy Act of 2005, Pub. L. No. 109-58, § 1251, 119 Stat. 594 (2005).

have enacted reactionary rules designed to curtail net metering.[163] These reactionary responses have created disarray in the states' renewable energy sectors, spurred lawsuits, and wasted time and expense as the commissions revisit their initial rulings.[164] Such reactionary responses are often the outfall of fast and reckless policymaking.

To be sure, not all energy and climate policy transfer fits squarely into the fast policy framework. Some policies that have moved quickly between governments do not represent neoliberal values, and some policy transfers have occurred laterally, rather than through international or national experts and intermediaries that seek to propagate a limited set of policy instruments at the local levels. While these distinctions arguably make the policy transfers ineligible for "fast policy" designation, the propensity of governments to engage in rapid policy adoption reveals a legislative and regulatory bias towards "quick fixes." Moreover, several state and local governments have engaged in deliberative policy development and design to create climate and energy policies that are well suited to local conditions. However, as concerns about climate change continue to escalate, states and local governments face increasing pressure to adopt policies that expert networks have endorsed. Although some might argue that the adoption of any policies to mitigate climate change and promote a transition away from fossil fuels represents progress, Oregon's experience as a quick fix and fast policy purveyor illustrates the risks of moving too fast in climate and energy policy design.

IV. OREGON'S LIFE IN THE FAST LANE

For more than a decade, Oregon has demonstrated an ongoing awareness of the urgency of climate change and has responded by enacting dozens of laws and policies aimed at mitigating Oregon's contribution to the problem. If the sole standard of a state's leadership were the number of policies adopted,

163. *See, e.g.*, Benjamin Storrow, *Is Nev. Poised to Change Course on Net Metering?*, CLIMATE WIRE (Nov. 1, 2016), http://www.eenews.net/climatewire/stories/1060045090/ [https://perma.cc/8P8B-Q35Z] (discussing Nevada, the "poster child" for the debate on net metering).

164. *Id.* (noting the net metering change was reversed); Daniel Cusick, *Nev. Faces Solar Exodus in Wake of Rate Changes*, CLIMATE WIRE (Jan. 11, 2016), http://www.eenews.net/climatewire/stories/1060030395 [https://perma.cc/36T4-2T9G] (discussing the immediate negative impacts of Nevada's decision to reduce net metering, including the loss of solar panel manufacturing firms and significant political and legal pressure).

Oregon's reputation as a climate leader would be well deserved.[165] However, not all of Oregon's policies have been effective in achieving their purposes; some have even been counterproductive in transitioning the state towards a clean energy future. To at least some extent, the success of Oregon's policies appears to depend on the simplicity of the policy, the degree to which Oregon developed the policies from the ground up, and the extent to which Oregon has tailored imported policies to the state's unique circumstances. Policy success also seems to hinge on the degree to which Oregon has established an effective governance system for implementing, evaluating, and adjusting its policies. In contrast, to the extent Oregon has imported complex policies without effective local tailoring or added complexity to otherwise straightforward imported policies, Oregon's policies have tended to fall short. Part A.1 thus discusses some of Oregon's effective policy designs and imports, Parts A.2 and A.3 discuss Oregon policies that have not lived up to expectations, and Part B explores the role that Oregon's existing regulatory and governance structure plays in Oregon's climate and energy policymaking effectiveness.

A. Oregon's Climate and Energy Policies

Oregon's existing climate and energy policies either establish broad economy-wide goals or focus on reducing greenhouse gas emissions from the electricity sector. Although addressing other sectors is crucial for a comprehensive climate change strategy, Oregon has few policies addressing emissions from other sectors, such as transportation or land use.[166] Within the areas in which Oregon has developed climate change policies, Oregon's greatest successes have resulted from its energy efficiency programs and policies designed to prevent construction of new coal-fired power plants. In contrast, many of Oregon's programs that aim to increase renewable energy and otherwise transition away from fossil fuels have incorporated design elements that increase the programs' complexity and weaken their effectiveness.

1. Oregon's Successes from Careful or Simple Policy Design

Oregon's successful energy efficiency programs and programs to prevent investment in new coal-fired power plants employ different regulatory models. While the energy efficiency programs require ongoing administration and monitoring, the coal-related laws use clear regulatory standards that require

165. *See Database of State Incentives for Renewables and Efficiency*, DSIRE—N.C. CLEAN ENERGY TECH. CTR., http://www.dsireusa.org/ [https://perma.cc/JEP2-H4WZ] (showing, in fact, that the Database of State Incentives for Renewables and Efficiency ranks Oregon as the fifth state for number of policies).

166. *See* Powers et al., *supra* note 160, at 17–18, 20, 44.

little administration. This section argues that effective regulatory and governance structures and simplicity, respectively, have enabled Oregon's successes in these areas.

a. Energy Efficiency Achievements

Energy efficiency policies have been a mainstay in Oregon's energy portfolio for decades.[167] In 1981, Oregon adopted a policy requiring its investor-owned utilities and public utilities to: administer energy conservation programs for residential and commercial customers, provide customers with information about the program, offer energy audits and other technical advice, and provide financing options for energy efficiency upgrades.[168] In 1999, Oregon established a public purchase charge of 3% of utilities' annual retail revenues; Oregon allocated 63% of the collected funds toward energy conservation and market transformation measures.[169] In 2007, legislators extended the public purchase charge to the end of 2025.[170] Additionally, in 2005, Oregon adopted energy efficiency standards for appliances, requiring appliances sold or installed in Oregon to be registered as compliant on a multi-state compliance website.[171] Finally, in 2009, Oregon enacted legislation to increase energy efficiency in buildings.[172]

To ensure the successful implementation of these policies, Oregon created a program manager, the Energy Trust of Oregon (ETO), which is responsible for most of Oregon's success in improving energy efficiency. Established in 2002, the ETO is an independent nonprofit that oversees conservation programs with some of its funding provided by the state's public purpose charge.[173] ETO's structure is critical to Oregon's successful energy efficiency programs. In many states, utilities that have a financial stake in selling more electricity are expected to also encourage energy

167. *See 2015–2017 State of Oregon Biennial Energy Plan*, OR. DEP'T ENERGY 11, https://www.oregon.gov/energy/Data-and-Reports/Documents/2015-2017%20Biennial%20Energy%20Plan.pdf [https://perma.cc/3GX2-WXGP] (last visited Apr. 23, 2017) ("Energy conservation is the foundation of Oregon's energy policy and traditionally its first 'fuel' of choice to meet energy demand.").

168. OR. REV. STAT. §§ 469.010, 469.651 (2015).

169. S.B. 1149, 70th Leg., Reg. Sess. (Or. 1999) (codified at OR. REV. STAT. § 757.612).

170. S.B. 838, 74th Leg., Reg. Sess. (Or. 2007) (codified at OR. REV. STAT. § 757.612).

171. H.B. 3363, 73rd Leg., Reg. Sess. (Or. 2005) (codified at OR. REV. STAT. § 469.233).

172. S.B. 79, 75th Leg., Reg. Sess. (Or. 2009) (codified at OR. REV. STAT. § 455.505).

173. *See Timeline*, ENERGY TR. OR., https://energytrust.org/timeline/ [https://perma.cc/5EBJ-HC6P].

conservation.[174] The inherent internal conflicts in this arrangement are often brushed aside. However, with ETO, its mission and independence from the electric utilities allow it to zero-in on efficiency.[175] Oregon's design of the ETO was a homegrown policy that has served the state well.

According to the American Council for an Energy-Efficient Economy's annual review, Oregon currently ranks as the seventh state in the nation for energy efficiency.[176] This ranking has dropped in recent years,[177] suggesting that the state is losing momentum in this action area or that other states have improved. It is also possible that spending guidelines imposed on ETO by the legislature and the PUC are unduly constraining ETO's ability to invest in innovative efficiency programs.[178] Despite this moderate drop in performance, however, Oregon ranks highly in its energy efficiency achievements and, more importantly, has the ability through the ETO to identify and correct program deficiencies.

b. Emissions Standards for New Coal-Fired Power Plants

Oregon has also achieved policy success through emissions standards aimed at preventing construction of new fossil fuel-fired power generation facilities. In 2009, Oregon adopted an emissions standard for new power plants of 1,100 pounds of CO_2 per megawatt-hour, a standard too stringent for coal-fired power plants to meet.[179] Oregon took the additional step of prohibiting utilities from entering into new long-term power purchase agreements for baseload power from plants that exceed the emission

---

174. *See* Susan Arterian Chang, *The Rise of the Energy Efficiency Utility*, IEEE SPECTRUM (May 1, 2008), http://spectrum.ieee.org/green-tech/conservation/the-rise-of-the-energy-efficiency-utility [https://perma.cc/3HQJ-JEL5].

175. *Id.*

176. *See State and Local Policy Database: State Scorecard Rank*, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON., http://database.aceee.org/state-scorecard-rank [https://perma.cc/77WU-GR72] (last visited Apr. 17, 2017) (ranking Oregon seventh in 2016).

177. Prior to 2016, Oregon had consistently ranked in the top five states since the rankings began. *See Oregon ranked fourth most energy-efficient state*, ENERGY TR. BLOG (Nov. 6, 2015), https://blog.energytrust.org/oregon-ranked-fourth-most-energy-efficient-state/ [https://perma.cc/4ZS3-ETNM]; *Oregon ranked 3rd most energy-efficient state*, ENERGY TR. BLOG (Nov. 18, 2014), https://blog.energytrust.org/oregon-ranked-3rd-most-energy-efficient-state/ [https://perma.cc/9DAV-7T3D]; *Oregon ranked 4th most energy-efficient state for three years running*, ENERGY TR. BLOG (Dec. 5, 2013), https://blog.energytrust.org/oregon-ranked-4th-most-energy-efficient-state-for-three-years-running/ [https://perma.cc/ZDT3-MV79] ("The nonprofit has produced the scorecard for seven years and Oregon has consistently been in the top five.").

178. *See* Inara Scott, *"Dancing Backward In High Heels": Examining and Addressing the Disparate Regulatory Treatment of Energy Efficiency and Renewable Resources*, 43 ENVTL. L. 255, 284–85 (2013), https://law.lclark.edu/live/files/14248-43-2-scott [https://perma.cc/DXP7-VCS2]; *see generally* Powers et al., *supra* note 160, at 24, 35 (discussing guidelines).

179. OR. REV. STAT. § 757.524 (2017).

standard.[180] These emissions standards set clear requirements that effectively prohibited new investments in new coal resources. In combination with a settlement to a Clean Air Act citizen suit that requires the state's only in-state coal-fired power plant to close,[181] Oregon's emissions standards will eliminate production of in-state coal-fired power by 2020.[182]

Collectively, the energy efficiency programs and emissions standards exemplify two successful strategies for effective climate and energy policymaking. Oregon's energy efficiency programs, which require ongoing implementation and monitoring, succeed because Oregon created an effective administrative structure through the ETO. Oregon's emissions standards do not require a separate administrative mechanism, because they establish clear requirements that existing agencies can administer. Both of these policies thus illustrate how policymaking tailored to local conditions can succeed.

2. Oregon's Mixed Results from Complex Energy Policies and Inadequate Governance

In contrast to the examples above, many of Oregon's climate and energy programs lack simplicity and an effective administrative structure. Oregon has dozens of climate and energy laws on the books. This section explores a few of them to illustrate how Oregon's policy development—much of which occurred through fast policy development or efforts to develop quick fixes to highly complex problems—has not lived up to expectations.

Oregon has only scratched the surface of its potential for wind and solar deployment. Oregon's rainy and forested reputation overlooks the sunny and arid eastern half of the state where wind and solar resources are abundant.[183] Furthermore, Oregon enjoys sunny summers, and its moderate temperatures provide ideal operating conditions for solar photovoltaic (PV)

180. *Id.* §§ 757.531(1)(a), 757.533, 757.536 (2017).

181. *Commission Acknowledges PGE Long-Range Energy Plan with Boardman Closure*, PUB. UTIL. COMMISSION OR. (Nov. 19, 2010), http://www.puc.state.or.us/Pages/news/2010/2010027.aspx [https://perma.cc/C2C7-BWN2].

182. Oregon has also enacted legislation to restrict the import of coal-based electricity from outside the state. Part IV, *infra*, discusses the legislation.

183. "The solar resource east of the Cascades is typically 30-to-40 percent greater than the Willamette Valley or Coast. However, solar energy technologies work throughout Oregon . . ." OR. DEP'T ENERGY, *supra* note 167, at 21. However, solar energy technologies work throughout Oregon. Additionally, the state has geothermal, biomass, and ocean energy potential. *Id.*

panels.[184] Within the service territories of the two large investor-owned utilities that dominate the state's electricity market, Oregon has the technical potential to produce 66 GW of solar PV systems.[185] Yet, by 2015, Oregon only had 134 MW of solar PV installed in the state, making Oregon twentieth in the nation.[186] Oregon has done only marginally better with developing wind. Oregon experienced a wind boom between 2008 and 2012;[187] as a result, Oregon has a cumulative installed nameplate capacity of 3,163 MW of wind, good enough for eighth place nationally.[188] Whereas solar has shown newfound promise in Oregon in the past few years, bringing 30 MW nameplate capacity online in 2015,[189] the state's wind development has declined dramatically, with only one new wind energy source representing 10.2 MW of nameplate capacity coming online since 2012.[190] Although Oregon has enacted a number of policies intended to encourage the development of renewable energy resources in the state, less than one-half of a percent of its technical solar potential and just over five percent of its technical wind potential have been installed.[191]

As for Oregon's policies targeted at reducing greenhouse gases and mitigating climate change, Oregon's performance is even worse. Oregon has yet to enact an economy-wide greenhouse gas emissions limitation, and its emissions trajectory is far in excess of the state's aspirational greenhouse gas reduction goal.

These shortcomings, however, are not due to a lack of political will to address climate change and promote an energy transition. Rather, they result

---

184. *See generally Northwest Solar Resource Maps*, U. OR. SOLAR RADIATION MONITORING LAB. (Feb. 17, 2004), http://solardat.uoregon.edu/NorthwestSolarResourceMaps.html [https://perma.cc/R59Y-WWTK].

185. Black & Veatch, *Solar Generation Market Research*, PORTLAND GENERAL ELECTRIC (2015), https://www.portlandgeneral.com/-/media/public/our-company/energy-strategy/documents/2015-08-13-solar-generation-market-research.pdf?la=en [https://perma.cc/WY39-G5BP]; *Revised Overview of PV Inputs, Data Sources, and Potential Study Results*, CADMUS GROUP, INC. (2012), http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2013IRP/PAC_2013IRP_Memo_PVInputs_09282012.pdf [https://perma.cc/AT9F-ZEFR].

186. *Solar Spotlight: Oregon*, SOLAR ENERGY INDUSTRIES ASS'N (2016), http://www.seia.org/state-solar-policy/oregon [https://perma.cc/MK85-C3E2].

187. *Id.*

188. *Oregon Wind Energy*, AM. WIND ENERGY ASS'N, http://awea.files.cms-plus.com/FileDownloads/pdfs/Oregon.pdf [https://perma.cc/X9M7-E7TQ] (last visited Apr. 16, 2017).

189. SOLAR ENERGY INDUSTRIES ASS'N, *supra* note 186.

190. *See Renewable Energy Projects*, RENEWABLE NORTHWEST PROJECT, http://www.rnp.org/project_map [https://perma.cc/2TWV-5HRJ] (last visited Apr. 16, 2017); *see also Project Chopin*, RENEWABLE NORTHWEST, http://www.rnp.org/node/project-chopin [https://perma.cc/H5FV-4NZM] (last visited Apr. 24, 2017).

191. These percentages reflect the state's deployment of roughly 3,000 MW of wind out of its 60,000 MW potential and of 124 MW of solar out of its 66 GW of potential. *See* AM. WIND ENERGY ASS'N, *supra* note 188; SOLAR ENERGY INDUSTRIES ASS'N, *supra* note 186.

from poorly designed policies, many of which deploy ineffective market-based strategies to increase flexibility for regulated entities. Many of these flexibility measures, moreover, derive from programs developed by others at the international, national, and subnational level that entered Oregon's regulatory system through a fast policy approach.

In short, as the examples that follow show, Oregon has a demonstrated willingness to enact policies that promote clean energy development, increase utilities' obligations to buy renewable power, and reduce greenhouse gas emissions from the energy sector. However, many of these policies are unnecessarily complicated and suffer from the many problems associated with fast policy adoption and a desire for quick fixes. In particular, Oregon's legislative efforts reveal an unwillingness to identify and address the core inhibitors of a clean energy economy. Oregon's policy experience also shows that Oregon frequently engages in shortsighted and reactive policymaking, rather than in deliberative and thoughtful policy design. As Part V explains, this quick-fix approach to climate and energy policymaking undermines the stability and predictability of the regulatory landscape, thereby imperiling businesses in the field, unnecessarily increasing risk, and stifling a productive investment atmosphere necessary for decarbonization. To illustrate Oregon's tendency toward quick fixes and fast policy, the following sections discuss some of Oregon's most important clean energy and climate policies.

a. State Tax Credits and Loan Programs

Oregon's efforts to promote renewable energy development through state tax credits and low interest loan programs date back to the late 1970s. In 1977, Oregon enacted the Residential Energy Tax Credit (RETC) to encourage homeowners to install renewable energy technologies.[192] In 1979, Oregon enacted the Business Energy Tax Credit (BETC) to encourage commercial entities to invest in renewable energy technologies.[193] Later that year, Oregon enacted the Small-Scale Energy Loan Program, which offers low-interest, fixed-rate, long-term loans for renewable energy projects.[194]

192. OR. REV. STAT. §§ 469B.130–469B.169 (2017); OR. ADMIN. R. §§ 330-070-0010-330-070-0097 (2017).

193. *See, e.g.*, Letter from Michael Kaplan, Deputy Dir. Or. Dep't of Energy, to Senate Interim Comm. on Env't & Nat. Res, (Jan. 15, 2013), https://olis.leg.state.or.us/liz/2013I1/Downloads/CommitteeMeetingDocument/31801 [https://perma.cc/QM29-G9NX] (outlining the history of the BETC program).

194. OR. REV. STAT. § 470.060 (2015).

These programs have provided critical support to renewable energy, yet they frequently get cut.

Perhaps the paradigmatic example of Oregon's reactionary and ineffective management of individual clean energy and climate policies, both at the administrative and the legislative levels, is the BETC program. In 2007, the legislature tweaked the long-standing program[195] by importing two key components of federal renewable energy support: first, the legislature significantly expanded the program to offer very large tax credits; and second, the legislature adopted the federal tax equity investor provision, creating a "pass-through" mechanism.[196] Unfortunately, the legislature lacked the foresight to realize the expanded program's potential popularity and failed to provide either additional funding or additional authority to the administering agency for the program's implementation. Instead, because the program was "wildly successful,"[197] its costs rapidly escalated beyond the state's budgetary capacity.[198] In addition, because applicants claim the tax credits over several years[199] and the program lacked an overall budgetary cap,[200]

---

195. H.B. 3201, 74th Leg., Reg. Sess. (Or. 2007).

196. *Id.*; *see generally, e.g.*, *Tax Credits, Tax Equity and Alternatives To Spur Clean Energy Financing*, U.S. PARTNERSHIP FOR RENEWABLE ENERGY FIN. (2011), http://uspref.org/wp-content/uploads/2011/09/Tax-Credits-Tax-Equity-for-Clean-Energy-Financing.pdf [https://perma.cc/T4MQ-M3BW].

197. House Chamber Floor Debate, 2009 Leg., 75th Sess., (Or. May 11, 2009), http://oregon.granicus.com/MediaPlayer.php?clip_id=7193 [https://perma.cc/Y6JH-BD25] (statement of Rep. Barnhart, calling the expansions in 2007 "wildly successful" at bringing new industries to the state).

198. Over both the 2007–2009 and 2009–2011 biennia, the BETC program cost over $40 million more than projected. *2011-2013 Tax Expenditure Report*, OR. DEP'T REVENUE 183 (2010) (reporting an actual revenue impact for 2009-2011 of $185 million); *2009-2011 Tax Expenditure Report*, OR. DEP'T REVENUE 178 (2008) (reporting an actual revenue impact for 2007-2009 of $68.6 million and a projected revenue impact for 2009-2011 of $143.8 million); *2007-2009 Tax Expenditure Report*, OR. DEP'T REVENUE 178 (2006) (reporting a projected revenue impact for 2007-2009 of $23 million). Given the legislature's scrabbling attempts to correct course, and higher projections than actual costs in later years, the program eventually cost the state only $59.5 million more *total* than projected, or approximately $7.4 million each year. *2015-2017 Tax Expenditure Report*, OR. DEP'T REVENUE 157, 185 (2014); *2013-2015 Tax Expenditure Report*, OR. DEP'T REVENUE 156, 186 (2012); *2011-2013 Tax Expenditure Report*, OR. DEP'T REVENUE 183 (2010); *2009-2011 Tax Expenditure Report*, OR. DEP'T REVENUE 178 (2008); *2007-2009 Tax Expenditure Report*, OR. DEP'T REVENUE 178 (2006).

199. Unlike most government expenditures, a tax credit program does not fit neatly into a projected budget. The government pays for the program through the tax revenue it forgoes when participants apply a tax credit to reduce their taxes owed to the state. Without a clear limit on how many tax credits may be awarded (a limit the BETC program frequently lacked), the costs of a tax credit program may easily surpass expectations, even due to seemingly positive factors such as higher-than-expected participation rates.

200. The Oregon 1999 legislature eliminated the program-wide budgetary cap. 1999 Or. Laws 966 (codified as amended at OR. REV. STAT. § 469B.142 (2015)) (eliminating the program's cap).

the 2007 changes created a path dependency wherein neither the legislature nor the agency[201] could correct course once credits were lawfully awarded. Following intense controversy over the program's poor implementation and unexpectedly high costs, and despite repeated legislative attempts to remedy the program,[202] the legislature finally sunset the program in 2011 and 2012,[203] though its costs will linger until 2022.[204] While renewable energy development benefitted from the strong price signal sent by the BETC, legislators' failure to design a sustainable incentive program has eroded political support for new economic incentives.

In fact, the RETC, an essential program for rooftop solar deployment, is scheduled to sunset at the end of 2017.[205] Lawmakers have not assessed how the sunset will affect the industry. While a two-year extension of the program is reportedly on the table,[206] the extension would serve as a stopgap measure that fails to address the larger structural impediments to a clean energy economy.

b. The Renewable Portfolio Standard

Like many states, Oregon has a Renewable Portfolio Standard.[207] Enacted in 2007, Oregon's RPS required its large utilities to obtain 25% of the electricity they sell from renewable energy sources by 2025, with additional interim targets.[208] In 2016, S.B. 1547 extended the RPS, requiring large utilities

---

201. One issue hampering ODOE's control in 2007 through 2010 was the lack of a "claw back" provision for the agency to reclaim tax credits from a failed project. *See Business Energy Tax Credit: February 2010 Recommendations*, OR. DEP'T ENERGY 6 (2009).

202. H.B. 4079, 78th Leg., Reg. Sess. (Or. 2016); H.B. 3672, 76th Leg., Reg. Sess. (Or. 2011); H.B. 3680, 75th Leg., Special Sess. (Or. 2009); H.B. 2472, 75th Leg., Reg. Sess. (Or. 2009) (this bill was vetoed by the governor and thus not enacted); H.B. 3619, 74th Leg., Special Sess. (Or. 2008).

203. H.B 4079, 76th Leg., Reg. Sess. (Or. 2012); H.B. 3672, 76th Leg., Reg. Sess. (Or. 2011); *see also* OR. REV. STAT. § 315.357 (2015).

204. *See supra* note 198.

205. OR. REV. STAT. § 469B.103 (2017).

206. Pete Danko, *Oregon Solar Industry Calls RETC Extension Top 2017 Priority, and Signs of Support Emerge*, PORTLAND BUS. J. (Nov. 23, 2016), http://www.bizjournals.com/portland/news/2016/11/23/oregon-solar-industry-calls-retc-extension-top.html [https://perma.cc/TPP2-X9YR].

207. *See, e.g.*, *State Renewable Portfolio Standards and Goals*, NAT'L COUNCIL ST. LEGISLATURES (2016), http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx [https://perma.cc/RW67-DM68] (showing numerous states adopted RPSs prior to Oregon).

208. OR. REV. STAT. §§ 469A.050, 469A.010 (2017).

to obtain 50% by 2040.[209] While Oregon's RPS has promoted renewable energy deployment, the RPS also contains several limiting factors that threaten to weaken the status of renewable energy and to suppress near-term renewable energy growth.

First, notwithstanding the 2016 expansion, Oregon's RPS still suffers from a lack of ambition. Although a 50% by 2040 standard may seem aggressive when compared to other state mandates, Oregon's own rate of renewable energy growth reveals the tepid nature of the RPS. The 2016 extension requires the same rate of deployment through 2040,[210] despite significant market changes that could facilitate faster deployment of renewable energy sources, such as falling costs, technological advancements, and an increased understanding of how to integrate renewable energy sources. Additionally, by requiring 50% of electricity to come from eligible renewables, the RPS allows utilities to procure additional power from fossil fuel resources. If Oregon utilities respond to the RPS by investing in new natural gas facilities, Oregon ratepayers may be accountable for stranded costs down the road, if Oregon lawmakers adopt aggressive greenhouse gas emissions reductions mandates in the future.

Another flaw in Oregon's RPS is that it allows for the indefinite banking of Renewable Energy Credits (RECs).[211] Indefinite banking allows utilities to stockpile RECs when renewable energy production exceeds regulatory demand, such as during an economic downturn or during a boom in renewable energy development. The stockpile decreases the utilities' need for RECs, thus dampening the market for new renewable energy sources. In 2016, Oregon took some measures to stop indefinite banking, but it also grandfathered in some indefinite RECs, including any issued before March 2016 and many of those generated before 2023.[212] Due to the REC banking rules in Oregon's RPS, Oregon's utilities projected they would have no need to invest in new renewable resources until approximately 2025.[213]

---

209. S.B. 1547, 78th Leg., Reg. Sess. (Or. 2016).

210. Instead of requiring 25% over 18 years (2007–2025), the revised RPS calls for an additional 25% over 15 years (2025–2040). Three years' difference does not adequately account for likely market changes already present and likely to continue and accelerate over the next 23 years.

211. *See* OR. REV. STAT. §§ 469A.130, 469A.140 (2017); OR. ADMIN. R. § 330-160.0005 (2017). RECs are an administrative tool used to demonstrate compliance with the RPS. A REC represents a unit of renewable energy production, typically one MWh per REC.

212. S.B. 1547, 78th Leg., Reg. Sess. (Or. 2016).

213. *Renewable Portfolio Standard Or. Implementation Plan 2017 through 2021*, PACIFICORP, UM 1790 at 5 (July 15, 2016), http://edocs.puc.state.or.us/efdocs/HAA/um1790haa112016.pdf [https://perma.cc/9AYH-DY44]; *see Petition for a Partial Waiver of Competitive Bidding Guidelines and Approval of RFP Schedule*, *In re Portland Gen. Elec. Co., Request for Proposals for Renewable Resources*, OR. PUB. UTIL. COMMISSION, No.

Finally, the RPS does not adequately support a diverse portfolio of renewable energy sources. Historically, the RPS largely benefited only wind, the cheapest eligible source.[214] Additionally, because of transmission availability combined with good resource value, the wind development has concentrated in the Columbia Gorge.[215] As a result of this concentration of resource type and geographic location, the grid suffers potential instability.[216] The revised RPS does nothing to address the grid's potential instability, even though doing so would ease grid integration challenges and spread the economic benefits of renewable energy development across the state. As a whole, the RPS does not provide a strong enough market signal to develop renewables at the pace required to respond to climate change. Nor does it include a strategy for integrating renewables on a large scale across the state. Rather, the RPS focuses only on creating a demand-driven market mechanism for some renewable development.

c. Solar Capacity Standard

To provide clearer support for solar, Oregon created a solar capacity standard—or solar carve-out—in 2009.[217] This policy required the state's investor-owned utilities to incorporate 20 MW of solar PV capacity by 2020.[218] The policy required that no project exceed 5 MW in installed capacity; for projects up to 500 kW, the policy allowed a REC multiplier of 2:1, giving twice as many RECs as the RPS ordinarily would.[219]

The solar carve-out provided critical support for solar, until Oregon repealed and replaced it in 2016 with other provisions, such as the community solar

---

UM 1773 4 (May 4, 2016), http://edocs.puc.state.or.us/efdocs/HAA/haa16267.pdf [https://perma.cc/ALS2-V8HN].

214. *Renewables Portfolio Standards Resources*, LAWRENCE BERKELEY NAT'L LAB., https://emp.lbl.gov/projects/renewables-portfolio [https://perma.cc/YF4Z-Z53S] ("Wind energy has been the primary form (64%) of all RPS-driven RE capacity growth to-date."). Note this analysis considers multiple states, some of which have carve-outs requiring a percentage come from specific resources, such as solar. This percentage may therefore underestimate wind's dominance to date.

215. *E.g.*, Ted Sickinger, *Too Much of a Good Thing: Growth in Wind Power Makes Life Difficult for Grid Managers*, OREGONIAN (July 17, 2010), http://www.oregonlive.com/business/index.ssf/2010/07/too_much_of_a_good_thing_growt.html [https://perma.cc/Q5H6-JRYB].

216. *Id.*

217. H.B. 3039, 75th Leg., Reg. Sess. (Or. 2009) (repealed by S.B. 1547, 78th Leg., Reg. Sess. (Or. 2016)).

218. *Id.*

219. *Id.*

program discussed below.[220] Oregon conducted no assessment of whether the replacement would provide meaningful support to solar developers.

d. Net Metering

In Oregon, roughly 10,000 solar PV projects with a combined capacity of more than 80 MW have been installed under the state's net metering program.[221] Despite driving a substantial portion of Oregon's solar development, Oregon lawmakers have not developed a long-term strategy for net metering in the state. Oregon's net metering program contains an individual system size cap[222] and an overall programmatic cap,[223] both of which limit the benefits that net metering can provide to a constrained transmission system.[224] The caps are presumably in place to limit the impact of net metering on the utility business model and to limit the potential of cost shifting from wealthy homeowners to low-income ratepayers that cannot afford to install a net metered energy system or are otherwise limited from doing so.[225] However, Oregon has not conducted an assessment of the system-wide benefits of net metering to determine whether the caps are

---

220. S.B. 1547, 78th Leg., Reg. Sess. (Or. 2016).

221. *HB 2941: Solar Incentives Report, Report to the Legislative Assembly*, PUBLIC UTIL. COMMISSION OR. 19 (Oct. 28, 2016), http://www.puc.state.or.us/electric_gas/2016%20HB%202941%20Solar%20Incentives%20Report.pdf [https://perma.cc/L57M-FEHU]; *See generally Background Brief on Or. Renewable Energy Resources*, LEGIS. COMMITTEE SERVICES 4 (2014), https://www.oregonlegislature.gov/citizen_engagement/Reports/BB2014OregonRenewableEnergy.pdf [https://perma.cc/4649-NSB3].

222. OR. REV. STAT. § 757.300 (2017) (setting the residential net metering cap at 25 kW per customer generator); OR. ADMIN. R. §§ 860-039-0010 (2017) (setting the non-residential net metering cap at 2 MW per customer generator).

223. OR. REV. STAT. § 757.300. The programmatic cap is not a hard cap but rather allows the PUC to determine whether to remove the interconnection requirement that the net metering statute places on utilities when the aggregated net-metered systems account for 0.5% of a utility's historic single-hour peak load. Thus far, the PUC has not determined the cap necessary and utilities are still required to interconnect net metered systems that comply with applicable specifications. *See*, *HB 2941: Solar Incentives Report, Report to the Legislative Assembly*, PUBLIC UTIL. COMMISSION OR. 19 (Oct. 28, 2016), http://www.puc.state.or.us/electric_gas/2016%20HB%202941%20Solar%20Incentives%20Report.pdf [https://perma.cc/L57M-FEHU] (noting that as of the end of 2015, PGE's net metering customers account for 1.05% of historic single-hour peak-load and PacifiCorp's net metering customers account for 1.36% of the utility's historic single-hour peak-load.) http://www.puc.state.or.us/electric_gas/2016%20HB%202941%20Solar%20Incentives%20Report.pdf.

224. *See* Mike Rogoway, *Prineville is Running Out of Electricity, Jeopardizing New Manufacturing Jobs*, OREGONIAN (Jan. 26, 2017), http://www.oregonlive.com/silicon-forest/index.ssf/2017/01/prineville_is_running_out_of_e.html [https://perma.cc/35JR-2ZXC].

225. *See generally* Pete Danko, *Oregon Utility Commission Taps the Brakes on Solar Proposals*, SUSTAINABLE BUSINESS OREGON, Aug. 31, 2016 *available at* http://www.bizjournals.com/portland/blog/sbo/2016/08/oregon-utility-commission-taps-the-brakes-on-solar.html (noting that utilities have been pushing PUCs to weaken net metering policies in several Western states by characterizing the policies as regressive subsidies).

serving this purpose. Furthermore, Oregon's net metering law does not authorize virtual net metering, which would allow homeowners without sufficient solar access or renters to offset their electricity consumption with energy produced offsite through community solar arrays.[226] In short, Oregon's net metering program has seemingly not been designed to achieve clear goals or purposes that other parts of Oregon's energy laws deem desirable.

e. Oregon's Implementation of PURPA

Enacted as federal law in 1978, the Public Utility Regulatory Policies Act (PURPA)[227] obligates utilities to purchase electricity generated by small power producers from qualifying resources,[228] such as wind and solar.[229] Though a federal statute, PURPA maintains a primary role for states to implement the law.[230] In Oregon between 1979 and early 2016, only three projects representing 2.6 MW of capacity were installed under PURPA.[231] Renewable energy developers have cited numerous shortcomings in Oregon's implementation of PURPA, in addition to economic considerations, to explain why the law failed to meaningfully encourage renewable energy development in Oregon over that period of time.[232] However, despite the administrative roadblocks, the falling costs of solar created an economic incentive that briefly spurred a dramatic rise in the number of PURPA contracts in Oregon. By April 2016, 59 additional contracts were signed for more than 430 MWs of solar PV capacity.[233]

---

226. *See generally* Powers et al., *supra* note 160, at 49 (noting that Oregon's net-metering law fails to authorize virtual net metering, a legal tool that would allow homeowners without sufficient solar access or renters to offset their electricity consumption with energy produced offsite).

227. Act of Nov. 9, 1978, Pub. L. No. 95–617, 92 Stat. 3117 (codified as amended at 16 U.S.C.A. § 2601 (West, WestlawNext through P.L. 115-22)).

228. 16 U.S.C. § 824a-3(a) (2012).

229. 18 CFR § 292.204(b).

230. 16 U.S.C. § 824a-3(f) (2012).

231. *See HB 2941: Solar Incentives Report*, *supra* note 221, at A-7.

232. *E.g.*, Letter from David W. Brown, Obsidian Renewables, LLC., to Representative Jessica Vega Pederson, Chair, House Comm. on Energy & Env't, State of Or. (May 24, 2016) https://olis.leg.state.or.us/liz/2015I1/Downloads/CommitteeMeetingDocument/90655 (citing a lack of transparency, few opportunities for public comment, onerous barriers to participation even for market participants, and frequent rule changes that undermined the ability of project developers to plan and finance projects as reasons why the law was failing to promote renewable energy development.) [https://perma.cc/8KVR-A3DS].

233. *Id.*

Just as the law was beginning to perform as intended, by bringing renewable energy projects online, the PUC revised its rules that implement PURPA to limit the economic feasibility of qualifying projects. In response to utilities' requests, the PUC lowered the capacity threshold of eligible facilities from 10 MW to 3 MW.[234] Now, facilities larger than 3 MW must negotiate contracts with utilities on a case-by-case basis, an arrangement that subjects the renewable power producer to the monopsony bargaining power of the utilities.

Utility opposition to PURPA is rooted in similar fears as utility opposition to net metering. The utilities fear losing their rate base and suggest that the grid is incapable of integrating the intermittent renewable resources.[235] Similar to its handling of complaints about net metering by the utilities, the Oregon PUC scaled back the efficacy of PURPA by imposing unnecessary limitations. This PUC action represents a quick fix aimed at assuaging the utilities' immediate concerns, but once again fails to address structural barriers that hinder a transition to a renewable energy economy.

3. Oregon's Mixed Results from Complex Policies Seeking to Control Emissions

Oregon's emissions reductions laws and policies have likewise achieved mixed success. As noted above, Oregon's emissions standards for new coal-fired power plants have effectively prevented investment in or construction of new coal-fired power plants. However, other emissions reductions programs have had much less success. Finally, the efficacy of some programs remains to be seen.

a. Greenhouse Gas Emission Reduction Goals

Like many countries and states, Oregon recognized the need for an economy-wide target for reducing greenhouse gas emissions. Instead of following the examples set by states like California and Connecticut, which both set binding targets with regulatory support, Oregon instead adopted aspirational goals.[236] In 2007, Oregon declared the state's goals for greenhouse gas emissions to plateau by 2020, fall to 10% below 1990 levels by 2020,

234. Krysti Shallenberger, *Oregon PUC Rejects PacifiCorp Bid to Trim PURPA Contracts*, UTILITY DIVE, Mar. 31, 2016, *available at* http://www.utilitydive.com/news/oregon-puc-rejects-pacificorp-bid-to-trim-purpa-contracts/416627/.

235. *See*, *e.g.*, Elisabeth Grarry & Steven Kihm, *Does Disruptive Competition Mean a Death Spiral for Electric Utilities?*, 35 ENERGY L.J. 1 (2014).

236. *Energy Regulation in the States: A Wake-up Call*, INST. FOR ENERGY RES. 3–7, http://instituteforenergyresearch.org/media/pdf/statereport.pdf [https://perma.cc/K3EG-UAFJ].

and fall to at least 75% below 1990 levels by 2050.[237] While the state was able to meet its 2010 goal (largely as a result of the slowdown in emissions occurring during the recession), current forecasts predict Oregon will not meet its future goals.[238] Under Oregon's current policies, the state will exceed its 2020 goal by almost 11 million metric tons of CO_2e and its 2050 goal by more than 40 million metric tons of CO_2e.[239] With aspirational goals and no regulatory agency to enforce them,[240] Oregon has failed to establish consequences for high emitters' noncompliance. Instead, the consequences of high emissions and climate change will fall on the public and future generations.

b. Emission Standard for New Natural Gas Plants

In 1997, Oregon created the Carbon Dioxide Emissions Standard to restrict emissions from new natural gas plants,[241] the first such standard in the United States.[242] Under this policy, new natural gas plants must emit no more than 0.675 pounds of carbon dioxide per kilowatt-hour of net electricity output, or obtain offsets.[243] Offsets, such as those in the international Clean Development Mechanism[244] or under the Clean Air Act's Non-Attainment New Source Review program,[245] excuse a facility for failing to comply so long as the facility pays for its emissions to be offset by

237. H.B. 3543, 74th Leg., Reg. Sess. (Or. 2007) (codified at OR. REV. STAT. §§ 468A.200–260 (2015)).

238. *Biennial Rep. to the Legislature*, Or. Global Warming Commission 8–9 (2017), http://www.keeporegoncool.org/sites/default/files/ogwc-standard-documents/OGWC%202017%20Biennial%20Report%20to%20the%20Legislature_final.pdf [https://perma.cc/NMR2-HMJN].

239. *Id.*

240. *See generally id.* (discussing the Oregon Global Warming Commission and its lack of regulatory authority).

241. OR. REV. STAT. § 469.503 (2017).

242. *See History of the Climate Trust*, CLIMATE TR., https://www.climatetrust.org/about/history/ [https://perma.cc/K3JF-6Y8F] (last visited Apr. 16, 2017).

243. OR. ADMIN. R. § 345-024-0550 (2017). The statutory rate was originally 0.70 pounds per kWh, but it allows adjustment by the implementing agency. OR. REV. STAT. § 469.503.

244. *See, e.g.*, *Carbon Market, International Offset Mechanisms Critical in Meeting Climate Change Challenge*, U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/press/news_room/newsletter/in_focus/items/4553.php [https://perma.cc/HY97-B8AQ] (last visited Apr. 15, 2017).

245. *See* 42 U.S.C.A. § 7503(c) (West, WestlawNext through P.L. 115-22); *see also* Permit Requirements, 40 C.F.R. § 51.165(a)(9) (2016).

reductions elsewhere.[246] Even assuming the efficacy of offsets as a general matter, Oregon's offset program under the CO_2 Emissions Standard is a clear example of a poorly thought out market mechanism that undermines rather than furthers emissions reductions goals.

Under Oregon's offset program, legislators and regulators, rather than the market, establish the price for offsets.[247] Moreover, utilities must pay the price of offsets through a one-time upfront payment based on utility projections of future CO_2 emissions.[248] If the fee falls short of actual costs of offsets, if the utilities emit more CO_2 than projected, or if the offset projects fail, utilities have no obligation to obtain more offsets or pay a higher price.

Oregon set the original fee amount too low and provided an inadequate means for increasing it. The statute originally set the offset fee at $0.57 per ton of emissions. The Energy Facility Siting Council (EFSC) may change the fee amount by no more than 50 percent in any two-year period and only if EFSC makes a finding that the resulting fee is "economically achievable" for new plants.[249] Since 1997, the EFSC has increased the fee to only $1.27 per ton,[250] an amount that is not sufficient to cover the administrative costs of running the program. It costs the Climate Trust, the nonprofit organization authorized to provide emission offsets,[251] an average of $4.32 to offset each metric ton.[252] Therefore, less than 30% of the offsets authorized by the program are actually purchased through the fee, vastly undermining the carbon reduction efficacy of the program.

Because the fee is too low, all new natural gas-fired power plants in Oregon have opted to pay the compliance fee rather than achieve the emissions reductions or forgo building new natural gas plants.[253] Additionally, the one-time charge does not contain a reopener that would allow EFSC to revisit the compliance payment as more is learned about the costs of greenhouse gas pollution. Therefore, not only does the offset mechanism discourage investment in pollution control technologies and fail to obtain the requisite amount of offsets, it creates a perverse incentive for new

246. OR. REV. STAT. § 469.503(2)(c)(C).
247. *Id*.
248. *Id*.
249. *Id.*
250. *Id.*; OR. ADMIN. R. § 345-024-0580 (2017).
251. *See* CLIMATE TR., *supra* note 242.
252. *Id.*
253. *See Plowing New Pathways: Developing Quality Offsets in a Maturing Markey, The Climate Trust's Five-Year Report to the Oregon Energy Facility Siting Council*, CLIMATE TR. (Oct. 2014), https://www.climatetrust.org/wp-content/uploads/2014/11/2014-Oregon-5-Year-Report-EMAIL-141117-CAM-FNL.pdf [https://perma.cc/RJ7Y-HMA7].

facilities to come online sooner and lock-in the low compliance fee.[254] A poorly designed policy, Oregon's CO_2 Emissions Standard does not actually offset the carbon emissions of new natural gas facilities, provides a funding structure for the Climate Trust that is dependent on new natural gas facilities coming online, and encourages the development of new natural gas facilities sooner rather than later to lock-in low offset prices.

c. Emission Standards for Coal-fired Power Plants

Although Oregon laws restricting investment in and construction of new coal-fired power plants have succeeded due to their clarity and simplicity, it is less clear if Oregon's efforts to eliminate imports of power from existing coal-plants will succeed. Oregon receives roughly 33% of its electricity from coal.[255] In an attempt to eliminate Oregon's reliance on coal-based electricity imported from outside the state, Oregon passed SB 1547 in 2016, which requires that "[o]n or before January 1, 2030, an electric company shall eliminate coal-fired resources from its allocation of electricity."[256] This does not require the two investor-owned utilities subject to the law to actually eliminate their usage of coal; instead, it requires them to eliminate coal resources from their retail rates.[257] In addition, the definition of "coal-fired resource" exempts "electricity that is included as part of a limited duration wholesale power purchase made by an electric company for immediate delivery to retail electricity consumers that are located in this state for which the source of the power is not known."[258] This means that the utilities may still purchase wholesale coal-fired power on a short-term basis to meet demand in Oregon. Oregon's attempt to eliminate coal-based imports does not directly prohibit the use or sale of coal-based electricity into Oregon. Instead, by altering the ratemaking treatment of coal-based power, the law hopes to send market signals that eliminate the use of coal in other states. Whether it will achieve that aim remains to be seen.

---

254. *See generally* OR. DEP'T ENERGY, *supra* note 167, at 5 (noting that there are new thermal gas plants being proposed in Oregon).

255. OR. DEP'T ENERGY, *supra* note 167, at 20.

256. S.B. 1547 § 1(2), 78th Leg., Reg. Sess. (Or. 2016).

257. *Id.* § 1(1)(a) (defining "allocation of electricity" as "for the purpose of setting electricity rates, the costs and benefits associated with the resources used to provide electricity to an electric company's retail electricity consumers that are located in this state.").

258. *Id.* § 1(1)(b).

In addition to the laws examined above, Oregon has many other climate and energy laws and policies. Yet, despite the abundance of laws, Oregon's progress on reducing greenhouse gas emissions and transitioning from fossil fuels has been weak. As a general rule, the simpler laws seem to achieve clearer results. Where the state's laws become more complicated, and particularly where they inject market mechanisms such as banked RECs and monetary offsets into the regulatory scheme, their performance diminishes. These dynamics are consistent with the critiques of fast policy. They should also, however, be expected when one considers Oregon's fragmented energy and climate governance system, discussed next.

B. Oregon's Climate and Energy Administration

Climate change mitigation and adaptation, by nature, requires the efforts of a broad range of sectors. From transportation, to agriculture, to forestry, to electricity regulation, to land use planning, to housing and beyond, there is no single governmental agency equipped to respond effectively and comprehensively to the challenges posed by climate change. Like most states, Oregon's energy and environmental governance responsibilities are spread among multiple agencies that serve distinct yet overlapping functions. Oregon has taken steps to gather information, develop strategies to respond to climate change, and to harmonize efforts across agencies, but these efforts have not been enough to develop an effective governance structure to respond to the scale of the challenge.

Oregon has undertaken numerous efforts to increase the amount of information available about climate change and clean energy in the state of Oregon.[259] Most noticeably, in 2007, Oregon created the Oregon Global Warming Commission (OGWC) to "recommend ways to coordinate state and local efforts to reduce greenhouse gas emissions" and to "recommend efforts to help Oregon prepare for the effects of global warming."[260] The OGWC is directed to study global warming, make recommendations on ways to coordinate state and local efforts to reduce greenhouse gas emissions, conduct public outreach, and report to the legislature every odd-numbered

259. In the same legislation that created the OGWC, Oregon created the Oregon Climate Change Research Institute to conduct research and serve as a clearinghouse on climate change information. The OCCRI is set up within the Oregon University System. H.B. 3543, 74th Leg., Reg. Sess. (Or. 2007). The OCCRI has run into similar funding problems as the OGWC. In 2015 the Oregon legislature passed legislation that directed the PUC to evaluate Oregon's solar PV incentive programs and provide recommendations. H.B. 2941, 78th Leg., Reg. Sess. (Or. 2015).

260. H.B. 3543, 74th Leg., Reg. Sess. (Or. 2007); *see also About the Commission*, OR. GLOBAL WARMING COMMISSION, http://www.keeporegoncool.org/content/oregon-global-warming-commission [https://perma.cc/U2CP-RRPD] (last visited Nov. 29, 2016).

year regarding Oregon's progress toward achieving its emissions reduction goals.[261] While the OGWC is empowered to study and report on the effects of climate change, it is not empowered to write substantive regulations, does not have enforcement authority, and is not funded. OGWC members serve on a volunteer basis, and the organizational structure of the OGWC is an unwieldy 25 members.[262] OGWC has been forced to seek funds from private sources such as grants and in-kind contributions from local professionals in order to create its website and conduct its information gathering and outreach functions.[263] Despite its organizational and funding challenges, OGWC has succeeded in publishing several reports.[264]

In 2009, the legislature directed the Environmental Quality Commission (EQC) to create a reporting and registry program for the import, sale, allocation, or distribution of electricity or fossil fuels that emit GHGs.[265] The legislature authorized the EQC to establish fees for air quality permittees to fund the program.[266] The EQC made the program applicable to entities that emit more than 2,500 metric tons of CO_2 per year and fit within a source-type category such as solid waste disposal facilities, wastewater treatment facilities, fuel importers, IOUs, consumer-owned utilities, and natural gas suppliers.[267] EQC's GHG reporting program takes the critical first step of getting regulated entities accustomed to monitoring, recording, and reporting their greenhouse gas emissions and provides important, quantified information for decisions going forward.

In 2011, then-governor John Kitzhaber convened a task force to develop a 10-Year Energy Action Plan.[268] Released in 2012, the Plan identified three primary goals: meeting 100% of electric load growth through energy

261. H.B. 3543, 74th Leg., Reg. Sess. (Or. 2007); s*ee also* Powers et al., *supra* note 160, at 8.

262. Powers et al., *supra* note 160, at 6.

263. *Id.* at 9.

264. *See, e.g.*, *Preparing Oregon's Fish, Wildlife, and Habitat for Future Climate Change: A Guide for State Adaption Efforts*, OR. GLOBAL WARMING COMMISSION (2008), http://www.defenders.org/publications/oregon_adaptation_efforts.pdf [https://perma.cc/JX2D-U47U]; *Roadmap To 2020*, OR. GLOBAL WARMING COMMISSION (2010), http://www.keeporegoncool.org/sites/default/files/Integrated_OGWC_Interim_Roadmap_to_2020_Oct29_11-19Additions.pdf [https://perma.cc/68AR-5XEZ].

265. OR. REV. STAT. §§ 468A.270, 468A.280 (2017).

266. *Id.* § 468A.315.

267. OR. ADMIN. R. §§ 340-215-0010 (2017).

268. *See*, John A. Kitzhaber, *10-Year Energy Action Plan*, OFF. GOVERNOR OR. 7 (2010), http://www.naseo.org/Data/Sites/1/documents/stateenergyplans/Ten_Year_Energy_Action_Plan_Final.pdf [https://perma.cc/26WS-QGH8].

efficiency and conservation, removing finance and regulatory barriers to clean energy infrastructure development, and accelerating the market transition to a cleaner transportation system.[269] Before significant progress could be made on the plan, however, scandal took the wind out of Oregon's clean energy sails when Governor Kitzhaber resigned from office in 2015 amidst allegations of improper influence peddling resulting from his fiancée's dual role as First Lady and clean energy consultant.[270]

Today, although the 10-Year Energy Action Plan remains in effect, Oregon lacks a strategic plan or a strategic planning agency to guide Oregon's long-term climate mitigation and energy decarbonization process. Without a clearer governance structure and a designated agency leading Oregon's efforts, it is likely that Oregon will continue to muddle through with quick fixes, piecemeal strategies, and increasingly fast policies to address climate change and energy decarbonization. These approaches are not optimal ways for addressing the highly complex problems associated with climate change and the elimination of fossil fuels.

V. THE BENEFITS AND RISKS OF QUICK FIXES AND FAST CLIMATE AND ENERGY POLICY

Oregon is certainly not the only state to use a quick fix or fast policy approach to climate and energy policymaking. Indeed, many climate and energy laws deployed by states have emerged from a fast policy framework, in which policies are developed, sanctioned, and then spread quickly and sometimes haphazardly. This fast policymaking process is not all bad, as it can propagate the transfer of effective laws and create regulatory momentum for further action. However, fast policymaking in the climate and energy sectors is also unlikely to address fundamental underlying impediments to decarbonization, and it may create new path dependencies that undermine climate mitigation efforts.

This is not to say that fast climate and energy policies necessarily fail. Indeed, some fast policies are simple and effective as designed. At other times, some fast policies ultimately become, with careful local tailoring, effective programs. Moreover, other benefits may emerge from fast climate and energy policy. However, as the next two sections describe, fast climate and energy policy is often a mixed bag.

---

269. *10-Year Energy Action Plan Modeling*, OR. DEP'T ENERGY (July 30, 2012), https://www.oregon.gov/energy/energy-oregon/Documents/2012%20Energy%20Action%20Plan%20Modeling%20Report.pdf [https://perma.cc/8FDC-CKMC].

270. *See* Lee Van Der Voo & Kirk Johnson, *Gov. John Kitzhaber of Oregon Resigns Amid Crisis*, N.Y. TIMES (Feb. 13, 2015), https://www.nytimes.com/2015/02/14/us/kitzhaber-resigns-as-governor-of-oregon.html [https://perma.cc/B4T9-9K8T].

A. The Benefits of Fast Climate and Energy Policy

Although fast policy approaches can carry several risks, they also offer certain benefits. First, states engaged in fast policy development can readily transfer developed policies from other states without necessarily engaging in the expensive and time-consuming process of designing their own policies from scratch. Taking advantage of these "political economies of scale"[271] accelerates the law-making process and thus potentially allows effective policies to transfer quickly to other jurisdictions. Successful passage of a popular law can then create the political will for policymakers to enact additional climate and energy laws, as success tends to beget success.[272] In addition, lawmakers that supported the original law may have sufficient buy-in to amend and improve the law if it appears to be operating inadequately.[273] Some fast policies, moreover, may work as expected without additional tailoring or analysis and thus create certainty and desired outcomes.[274] Finally, fast policy mobility can lay the groundwork for regional cooperation that may be essential to effective climate mitigation and energy decarbonization.[275]

1. The Ability to Enact Laws Quickly and Inexpensively

Fast policy presents an opportunity for policymakers to enact policies quickly and inexpensively by relying on the work of early-moving states or influential policy advocates.[276] For states struggling to balance budgets

---

271. David Leebron, *An Analysis of Harmonization Claims*, 10 COLUM. J. ASIAN L. 308, 311–12 (Fall 1996).

272. *See generally* Derek Walker, *New Study: California's Carbon Market Delivers for Economy and Climate*, ENVTL. DEF. FUND (Jan. 16, 2015), https://www.edf.org/blog/2015/01/16/new-study-californias-carbon-market-delivers-economy-and-climate [https://perma.cc/85A5-NYVW].

273. *Id.*

274. *Rocky Mountain Farmers Union v. Corey*, 730 F.3d 1070, 1105 (9th Cir. 2013).

275. *See*, *e.g.*, Jan Hamrin, *REC Definitions and Tracking Mechanisms Used by State RPS Programs*, CLEAN ENERGY STATES ALLIANCE 1 (2014), http://www.cesa.org/assets/2014-Files/RECs-Attribute-Definitions-Hamrin-June-2014.pdf [https://perma.cc/MRZ2-G32B] (discussing interstate REC trading).

276. The rise and influence of the controversial entity, the American Legislative Exchange Council (ALEC), may be attributed to state legislators' need for ready-made legislation, due to their own lack of time and resources. *See, e.g.*, Alexander Hertel-Fernandez, *ALEC Has Tremendous Influence in State Legislatures. Here's Why.*, WASH. POST (Dec. 9, 2013), https://www.washingtonpost.com/news/monkey-cage/wp/2013/12/09/alec-has-tremendous-influence-in-state-legislatures-heres-why/?utm_term=.cf8a1d6bb88e [https://perma.cc/77CL-

or citizen legislators who have full-time jobs outside of state government, the ability to benefit from these political economies of scale cannot be overstated.[277] In Oregon, for example, templates for many of the state's existing energy and climate policies, including the greenhouse gas goals, some of the emissions standards requirements for fossil fuels, the state's RPS, and several subsidy and incentive programs, all originated from outside the state.[278] The ability to import these laws into the state allowed Oregon to avoid much of the time and expense associated with designing from scratch its own regulatory programs.

2. Political Will and Momentum

Fast policy can also build political will and momentum to enact future climate and energy laws and, under some circumstances, to correct shortcomings and close loopholes in existing laws. Many climate and energy laws receive strong public support once enacted.[279] This support can carry forward to encourage another round of climate and energy lawmaking, particularly when lawmakers and policy advocates engage in effective outreach and messaging to celebrate the passage of a popular policy.[280] Once Oregon advocates' efforts to pass the coal-to-clean energy legislation succeeded, they were then able to use that success to promote passage of other climate and energy laws during the 2017 legislative session.[281] Policy mobility can therefore lay the groundwork for states to continually enact climate and energy legislation. Moreover, as leading states continue to

---

AESR] ("In short, ALEC is successful because legislators in many states are pressed for time and have few resources for developing legislation – making ALEC's pre-written model bills, research assistance and policy expertise all the more appealing.").

277. *Id.*

278. *See generally supra* Part IV. Oregon's emission standard for new natural-gas facilities was the first in the nation; otherwise, all the other policies had already been implemented elsewhere. *Id.*

279. *New Poll Shows Colorado Voters Supportive of Renewable Energy*, AM. COUNCIL ON RENEWABLE ENERGY, http://www.acore.org/resources/news-media/press-releases/2714-new-poll-shows-colorado-voters-supportive-of-renewable-energy [https://perma.cc/X89M-NQ5W] (last visited Mar. 19, 2017).

280. *See* Brad Avakian & Jackie Dingfelder, *Ignore the Naysayers and Pass the No-Coal Bill (Opinion)*, OREGONIAN (Feb. 25, 2016), http://www.oregonlive.com/opinion/index.ssf/2016/02/ignore_the_naysayers_and_pass.html [https://perma.cc/QZ4E-SR3B] (urging Oregon legislators to build on the success of its original RPS by passing the coal-to-clean legislation and pointing out the economic benefit and jobs growth from the original legislation).

281. *See generally* James Cronin, *Overshadowed Legislation Incentivizes Utility-Scale Solar in Oregon*, PORTLAND BUS. J. (Mar. 4, 2016), http://www.bizjournals.com/portland/blog/sbo/2016/03/overshadowed-legislation-incentivizes-utility.html [https://perma.cc/HR3K-Y3Q2] (noting that HB 4037 helps incentivize solar production in Oregon that would help meet the mandate for SB 1547).

upgrade their own laws, advocates in later-moving states can use those upgrades to justify continued policy improvements.[282]

In addition, fast policymaking can lead to necessary policy reforms once climate and energy laws are on the books. Fast policy allows states to readily import policy ideas from other jurisdictions. If it turns out that the imported policies are not adequately suited to the state, policymakers can make legislative amendments or rely on regulatory agencies to correct the design flaws.[283] The initial sponsors of the fast policy laws would presumably have personal stake in the laws' success to be willing to advocate for the necessary adjustments. Fast policy can thus ensure that lawmakers have skin in the game, which will encourage them to cultivate the laws' success.

3. Certainty Associated from Clear Requirements

Some fast policies can achieve success because of the clarity they create. Policy imports that create simple and unambiguous requirements may work effectively regardless of any local tailoring. In addition, states may benefit from legal certainty established in lawsuits challenging policies enacted by early adopters of climate and energy laws.[284]

Relatively simple and discrete laws may be ideally suited to quick policy transfers. For example, a law banning construction of any new coal-fired power plant within a state would create an unambiguous mandate that could be implemented relatively easily without further local analysis or rulemaking. This type of law would also likely fit within the state's exercise of traditional

---

282. *See generally* Robert Walton, *New Mexico Lawmakers Propose Expanding RPS to 80% by 2040*, UTIL. DIVE (Feb. 3, 2017), http://www.utilitydive.com/news/new-mexico-lawmakers-propose-expanding-rps-to-80-by-2040/435425/ [https://perma.cc/PM2J-N23V] (describing New Mexico's proposal of 80% renewable energy by 2040 fitting within Hawaii's target of 100% renewable energy by 2045 and California's target of 50% renewable energy by 2030).

283. *See generally* Herman K. Trabish, *Inside California's Plans to Jump-Start Community Solar Development*, UTIL. DIVE (Mar. 5, 2015), http://www.utilitydive.com/news/inside-californias-plans-to-jump-start-community-solar-development/370218/ [https://perma.cc/7JZ8-LTCW] (describing the CPUC's implementing process for community solar in California and how it is, in part, modeled off efforts in Minnesota and California that have withheld legal challenges).

284. *See* Anne Havemann, *Surviving the Commerce Clause: How Maryland Can Square its Renewable Energy Laws with the Federal Constitution*, 71 MD. L. REV. 848, 850–52 (2012) (describing how Maryland can adjust its RPS based on the litigation experiences of other states in defending their RPSs).

state police powers and thus raise fewer legal questions than a law with broader interstate effects.[285] As another example, laws requiring state and local agencies to procure materials that meet certain efficiency standards could operate effectively without much local tinkering and would readily fit within the government's ability to regulate itself as a market participant.[286] Although laws that appear simple could nonetheless face practical and legal complications, fast policy seems particularly well suited to discrete mandates that arise under traditional state authority.

States may also benefit from importing laws that have survived legal challenges in other jurisdictions. Most notably, the Clean Air Act encourages interstate policy transfers in its vehicle emissions standards program. Under the Clean Air Act, states are generally preempted from establishing their own vehicle emissions standards.[287] However, if California receives a waiver from the Environmental Protection Agency to enact its own standards, other states may adopt the California standards as well.[288] Indeed, Oregon has adopted many California standards.[289] Any legal challenge to the California waiver would occur under the Clean Air Act's judicial review provisions, and once a court upholds the California waiver, other states would likely not face similar preemption lawsuits.[290] Thus, California's vehicle emissions standards are specifically adapted to interstate transfers.[291]

---

285. *See, e.g.*, *Oxygenated Fuels Ass'n v. Davis*, 163 F. Supp. 2d 1182, 1188 (E.D. Cal. 2001), *aff'd*, 331 F.3d 665 (9th Cir. 2003) (noting states enjoy "great latitude under their police powers to legislate" to protect, among other things, the public health and environment, and dismissing a challenge to California's ban on a gasoline additive where the ban sought to reduce the risk of groundwater contamination). For more on state police powers generally, *see, e.g.*, Brian W. Ohm, *Some Modern Day Musings on the Police Power*, 47 URB. LAW. 625 (2015).

286. *See, e.g.*, *Engine Mfr.'s Ass'n v. S. Coast Air Quality Maint. Dist*., 498 F.3d 1031, 1047–48 (9th Cir. 2007) (applying the market participant doctrine to uphold California's requirement that government vehicle fleets meet certain standards, including fuel efficiency standards). For more on the market participant doctrine generally, *see, e.g.*, David S. Bogen, *The Market Participant Doctrine and the Clear Statement Rule*, 29 SEATTLE U. L. REV. 543 (2006).

287. 42 U.S.C.A. § 7543 (West, WestlawNext through P.L. 115-22).

288. *Id.*; *see also, e.g.*, Motor Vehicle Mfr.'s Ass'n v. N.Y. State Dep't of Envtl. Conservation, 17 F.3d 521, 524–25 (2d Cir. 1994) (discussing the Clean Air Act's waiver provision for California and how it allows other states, such as New York, to "piggy-back" onto California's standards so long as both states follow the proper procedures).

289. *See, e.g.,* OR. ADMIN. R. § 340-257-0050 (2017) (listing the California standards which Oregon has adopted).

290. *See, e.g.*, Motor & Equip. Mfr.'s Ass'n v. E.P.A., 627 F.2d 1095 (D.C. Cir. 1979) (upholding the Environmental Protection Agency's grant of a waiver to California under § 7543).

291. In recognizing other states may prefer to adopt California's standards over the federal baseline, Congress structured the opt-in provisions to best facilitate policy adoption while limiting any negative impacts on the interstate market from having multiple standards. *See Motor Vehicle Mfr.'s Ass'n*, 17 F.3d at 527 ("It was in an effort to assist

States may also benefit from the legal certainty associated with importing policies that have survived dormant Commerce Clause challenges within the same circuit for the U.S. Court of Appeals and avoiding policies that fail these challenges.[292] The dormant Commerce Clause has become a key tool for opponents of climate and energy policies, casting a pall on states' ability to enact certain types of laws.[293] The Ninth and Tenth Circuits upheld state climate and energy laws against dormant Commerce Clause challenges,[294] while the Seventh Circuit impugned a facially discriminatory RPS[295] and a judge on the Eighth Circuit voted to strike down a Minnesota emissions standard on dormant Commerce Clause grounds.[296] Until the Supreme Court clarifies its dormant Commerce Clause jurisprudence, the circuit courts' decisions provide some legal clarity for states seeking to import climate and energy policies from states within the same appellate jurisdiction. This enabled Oregon, for example, to rely on the Ninth Circuit's decision upholding California's low-carbon fuel standard when Oregon imported the same standard.[297] In the increasingly litigious environment surrounding

---

those states struggling to meet federal pollution standards that Congress . . . directed in 1977 that other states could . . . 'piggyback' . . . this opt-in authority . . . is carefully circumscribed to avoid placing an undue burden on the automobile manufacturing industry.").

292. Whereas the Commerce Clause of the U.S. Constitution empowers the federal government to regulate interstate commerce, courts have interpreted the Commerce Clause to implicitly restrict states from regulating interstate commerce, an interpretation known as the Dormant Commerce Clause. *See, e.g.*, Alexandra B. Klass & Jim Rossi, *Revitalizing Dormant Commerce Clause Review for Interstate Coordination*, 100 MINN. L. REV. 129, 155–56 (2015). The Dormant Commerce Clause thus aims to prevent states from engaging in economic protectionism and either discriminating against out-of-state actors or otherwise impermissibly burdening interstate commerce. *Id.* For further discussion of the Dormant Commerce Clause and its application to climate and energy laws, *see id.* at 155–70.

293. *See generally* James W. Coleman, *Importing Energy, Exporting Regulation*, 83 FORDHAM L. REV. 1357 (2014) (noting that state action on climate change is critical but often hampered by legal challenges under the Dormant Commerce Clause); Steven Ferrey, *Carbon Outlasts the Law: States Walk the Constitutional Line*, 41 B.C. ENVTL. AFF. L. REV. 309 (2014) (discussing how state energy laws are in legal jeopardy).

294. Energy & Envtl. Legal Inst. v. Epel, 793 F.3d 1169, 1171 (10th Cir. 2015); Rocky Mountain Farmers Union v. Corey, 730 F.3d 1070, 1093 (9th Cir. 2013).

295. Ill. Commerce Comm'n v. F.E.R.C., 721 F.3d 764, 775–76 (7th Cir. 2013).

296. North Dakota v. Heydinger, 825 F.3d 912, 913 (8th Cir. 2016).

297. Am. Fuel & Petrochemical Mfrs. v. O'Keeffe, 134 F. Supp. 3d 1270, 1277 (D. Or. 2015) (finding any claim of facial discrimination barred by *Rocky Mountain Farmers Union*). Commentators noted that the plaintiffs in Oregon faced an "uphill battle" to combat the precedent from the California standard. Keith Goldberg, *Challenge to Ore. Fuel Standards is a Legal Long Shot*, LAW360 (Mar. 24, 2015), https://www.law360.com/

state climate and energy policies, legal certainty offers a clear benefit to states engaged in fast policy.

4. Laying the Groundwork for Regional Cooperation

Finally, in the absence of national leadership or collaborative regional policymaking, fast policy design may facilitate the creation of regional climate and energy programs, such as regional emissions trading programs and REC trading markets. Thus far in the United States, existing greenhouse gas emissions trading programs have emerged either from a collaborative regional develop process—as in the case of the Regional Greenhouse Gas Initiative[298]—or at the state level—as with California's cap-and-trade program.[299] Many climate advocates and policymakers have supported expansion of these programs to create either a national emission trading system[300] or larger regional emissions trading markets.[301] For example, in the mid-2000s, western states attempted to create a western greenhouse gas emissions program through an effort called the Western Climate Initiative ("WCI").[302] At various points during the negotiation of the WCI, it seemed possible that a majority of states in the West would join the WCI.[303] However, the WCI process lost momentum overtime.

The recommended market designs developed through the WCI, however, remain relevant in those states that continue to pursue emissions trading, as does California's existing emissions trading program. For example, in Oregon, state leaders and the Department of Environmental Quality have expressly modeled proposed state emissions trading designs off of the WCI and California's program.[304] In the event Oregon eventually passes its own greenhouse gas emissions trading program, its use of the WCI and Californian models should enable better regional integration.

---

articles/635007/challenge-to-ore-fuel-standards-is-a-legal-long-shot [https://perma.cc/DZM7-U9UM].

298. *See Program Overview*, REGIONAL GREENHOUSE GAS INITIATIVE, https://www.rggi.org/design/overview [https://perma.cc/V2RM-SQ9W] (last visited Feb. 15, 2017).

299. A.B. 32, 2006 Leg., Reg. Sess. (Cal. 2006).

300. *See*, *e.g.*, American Clean Energy and Security Act (the "Waxman-Markey" climate bill), H.R. 2454, 111th Cong. (2009).

301. *See, e.g.*, *Western Climate Initiative, Inc.*, WESTERN CLIMATE INITIATIVE, INC. http://www.wci-inc.org/ [https://perma.cc/59L6-FNRM] (last visited Feb. 15, 2017).

302. *Brooks V. Rice*, *The "Triumph" of the Commons: An Analysis of Enforcement Problems and Solutions in the Western Climate Initiative*, 22 PACIFIC MCGEORGE GLOBAL BUS. & DEV. L. J. 401, 402–03 (2010).

303. *Id.* at 402–03.

304. *Considerations for Designing a Cap-and-Trade Program in Oregon*, OR. DEP'T ENVTL. QUALITY 7 (Feb. 14, 2017), https://www.oregon.gov/deq/FilterDocs/ghgmarketstudy.pdf [https://perma.cc/9RXK-USD3] (describing the agency's report focused on the California and WCI models, per the legislative directive).

Policy mobility has also enabled interstate REC markets to develop. A majority of states that have enacted RPSs use RECs to measure compliance and develop new markets for renewable resources.[305] In most states, regulated utilities may use RECs produced from out-of-state sources to comply with at least a portion of their RPS mandates.[306] However, because each state has different rules regarding the types of energy that qualify for the RPS, the attributes represented by RECs, and even the value that each REC represents, regional REC tracking systems emerged to facilitate interstate REC trading.[307] The Western Renewable Energy Generation Information System enables Oregon's utilities, for example, to purchase RECs from across the west.[308] Although local adjustments to RPSs has complicated the REC markets, policy mobility enabled these markets to form in the first place. As more states enact or expand RPS programs, interstate markets may become even more important in facilitating renewable energy development.

Fast policies have therefore had an important, and often positive, impact on climate mitigation and energy decarbonization. Indeed, during the administrations of Presidents Clinton and George W. Bush, when the federal government played a weak and even obstructionist role in mitigating climate change, interstate policy mobility was essential to ensuring states began to address climate change and support renewable energy resources. Moreover, these policy transfers helped create regional markets that could continue to grow, even under a new Trump Administration that appears hostile to climate science, much less effective climate change mitigation. It is difficult to imagine where U.S. greenhouse gas emissions would be today without the leadership of and policy mobility between states. Thus, on many levels, fast climate and energy policy has yielded significant benefits.

B. The Limitations of Fast Climate and Energy Policy

The benefits of fast climate and energy policy, however, do not necessarily mean that fast policy approaches are optimal for achieving climate mitigation and energy decarbonization. In reality, most successful policy transfers have involved relatively simple programs, such as RPSs or emissions prohibitions, that attempt to create or constrain markets through supply and demand-side mandates. However, even these simple programs can

305. Hamrin, *supra* note 275, at 1.
306. Leon, *supra* note 156, at 6.
307. Hamrin, *supra* note 275, at 4–10.
308. *See* OR. ADMIN. R. § 330-160-0020 (2017).

quickly become complicated as states adjust imported policies to meet local needs, as mandates become more stringent, as incumbents push back against market changes, or as state policies increasingly impact interstate energy markets.

Fast policy designs also often fail to consider or correct underlying structural, regulatory, or market problems that support the use of fossil fuels. Fast policies can therefore lead to new path dependencies or produce stranded costs, which may promote expanded fossil fuel use. If imported state policies fail to achieve the advertised benefits, this may lead to political backlashes or policy fatigue. Fast policy may also create a dependency upon imported policies and thereby deter policymakers from taking proactive steps to address local climate and energy needs. Finally, fast policy may increase the likelihood that a state's imported policies will be struck down by courts. These risks, combined with the urgency of climate change, make careful state policymaking increasingly important, particularly as the federal government under the Trump Administration retreats from progressive climate mitigation efforts.

1. The Complicated Web of Climate and Energy Policy

Climate change mitigation and energy decarbonization pose some of the most complicated challenges facing our society. They both require a vast transformation of the status quo, which will disrupt investment-backed expectations of politically powerful entities, engendering strong, well-organized opposition from incumbents.[309] Beneficiaries, on the other hand, are diffuse and not necessarily represented in the political process.[310] Additionally, the grid and the atmosphere are not confined to traditional political boundaries, making long-term negotiation and compromise necessary between neighbors who may have vastly different political ideologies. Also, the relatively short election cycle does not lend itself well to solving problems with far off benefits and immediate burdens.[311] Further, because the solutions are technical and complex, many of the fine details that have major impacts

309. *See* Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1157 (2009).

310. *See* Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part I): Ecological Realism and the Need for a Paradigm Shift*, 39 ENVTL. L. 43, 43–45 (2009).

311. Lazarus, *supra* note 309, at 1167.

fail to arouse interest in the general public[312] or are easily obfuscated through well-funded messaging campaigns.[313]

The political landscape of each state is unique. Legislators have different ideologies, agendas, and levels of sophistication about climate mitigation and clean energy. Indeed, there is not even a consensus that climate change poses a threat to society and that a transition to renewables is necessary.[314] Administrative agencies have varying levels of funding and capacity to implement programs and varying ability to withstand outside pressure from opponents of climate mitigation and clean energy.[315] These differences in state ideologies and capabilities impact the form of final legislation and the effectiveness of its implementation. Further, the administrative structure—in which different agencies are tasked with specific problems, have different areas of expertise, and jurisdiction over a limited set of action areas—is fundamentally at odds with a challenge like climate change that transcends issue areas.[316]

Climate change mitigation and a clean energy transition do not lend themselves to a silver bullet solution. Some argue that attaching a price to carbon through either a carbon tax or through cap-and-trade will internalize the cost of carbon pollution and allow the market to properly incentivize the best solutions to the problem.[317] While internalizing externalities would help, it would not be sufficient to realize the scope of changes necessary to avoid climate disruption.[318] Such a policy would do nothing to reduce the monopsony power of utilities, address land use and zoning impediments,

---

312. *See, e.g.*, Lori Bird et al., *Impact of Rate Design Alternatives on Residential Solar Customer Bills: Increased Fixed Charges, Minimum Bills and Demand-Based Rates*, NAT'L RENEWABLE ENERGY LAB. (2015), http://www.nrel.gov/docs/fy15osti/64850.pdf [https://perma.cc/54QF-9AZT].

313. Evan Lehmann, *Free-Market and Pro-Fossil Fuel Groups Ally to Hold the Line Against a Carbon Tax*, E&E NEWS (Nov. 28, 2012), http://www.eenews.net/climatewire/stories/1059973001/ [https://perma.cc/DK5N-YLL9].

314. Cary Funk & Brian Kennedy, *The Politics of Climate*, PEW RES. CTR. (Oct. 4, 2016), http://www.pewinternet.org/2016/10/04/the-politics-of-climate/ [https://perma.cc/9G6K-M554].

315. *See*, e.g., *supra* note 264 (discussing how the Oregon Global Warming Commission had to fund-raise money because it lacked sufficient public funding).

316. *See generally* Lazarus, *supra* note 309, at 1179–81 (discussing ecosystem problems that defy easy solutions).

317. Hannah Hess, *GOP Statesmen Launch 'Uphill Slog' for Carbon Tax*, E&E NEWS (Feb. 8, 2017), http://www.eenews.net/greenwire/2017/02/08/stories/1060049753 [https://perma.cc/KVZ2-26JA].

318. Felix Mormann, *Requirements for a Renewables Revolution*, 38 ECOLOGY L. Q. 903, 938 (2011).

reduce other direct and indirect subsidies to fossil fuels, ensure a diverse portfolio of renewable energy technologies by location or technology type, and would not contribute to ensuring a reliable grid capable of integrating high levels of renewables.[319] Because there is no simple solution, legislatures and agencies must grapple with the difficult task of addressing these interrelated and complex issues, and they must do so in the context of highly charged special interests and inherent structural impediments discussed above.

Not only is the regulatory landscape unique in each state, so is the pool of market participants and the physical infrastructure that has been built over decades. Utilities differ in size, ownership type, and generation mixes. Within generation mixes, each individual asset has different operating characteristics and a different remaining useful life. In order to maximize efficiency, such fact-specific considerations regarding existing physical infrastructure must be examined and the extent to which existing infrastructure can be repurposed for renewable energy technologies analyzed. For example, fossil fuel powered generating units may be in an area with a good solar or wind resource, but they also may not. If areas with good renewable resources do not correspond with existing fossil fuel infrastructure, then either more infrastructure investments will be necessary to bring renewables online or perhaps more reliance on distributed generation would be more beneficial in such a state. For example, a lack of transmission capacity has forestalled significant solar development in sunny eastern Oregon,[320] while the availability of transmission capacity along the Columbia Gorge helped facilitate a boom in wind development.[321] Details such as these have major impacts on the composition of the renewable energy industry in each state because they impact what types of generation are best suited for the locality, which business models will succeed, and which resources will need assistance to prosper.

In sum, there is no plug-and-play solution for climate change mitigation and clean energy development. Each regulatory landscape, the physical components of the grid in each state, and the marker participants are all respectively distinct. The barriers to a clean energy transition are diverse enough that no single solution will overcome all the challenges.

---

319. *Id.* (finding that a price on carbon would do nothing to reduce market barriers to entry nor regulatory barriers and would augment the risk of replacing a fossil fuel path dependency with a path dependency on just a few currently least cost renewables).

320. *See supra* note 183 and accompanying text.

321. *See supra* note 215 and accompanying text.

2. Failures to Identify and Address Underlying Problems

Fast policy is not designed to identify and correct the underlying barriers impeding states from effective climate mitigation and energy decarbonization. Fast policy is premised on the idea that similar problems can be remedied by similar solutions. Fast policy therefore aims to remedy symptoms, rather than to diagnose and remedy the underlying causes of a problem. Indeed, if anything, fast policy assumes that states with similar problems have similar underlying causes. By presuming that the causes are the same, fast policy offers standardized remedies that are typically not tailored to a specific state. Although a state can of course tailor a fast policy to local circumstances, the mere act of importing the fast policy tends to limit the state's ability to accurately diagnose a problem. In other words, fast policy tends to create and reinforce cognitive biases that may undermine the discovery of effective policy solutions.

Decision makers, like all humans, suffer from cognitive biases.[322] Such biases manifest differently under varying circumstances, but they are endemic to the human condition. For example, cognitive biases likely contribute to medical misdiagnoses, because medical practitioners are trained to look for the most obvious explanations of medical problems.[323] Once they identify a potential cause, their brains tend to get stuck on that cause.[324] Similarly, lawmakers also look for the obvious solutions, without undertaking a deeper analysis of underlying problems. Also, many lawmakers falsely presume that humans are rational economic actors who will respond in predictable ways to market signals, despite ample evidence to the contrary.[325] Overcoming these biases is possible, but it requires "a slow, deliberate, analytical and consciously effortful mode of reasoning about the world."[326]

In the arena of climate and energy policy reform, deliberative and analytical thinking are particularly important, because each state has different underlying

322. *See* DANIEL KAHNEMAN, THINKING, FAST AND SLOW 142 (Kindle ed. 2016).

323. *See*, *e.g.*, Jerome Groopman, *What's the Trouble? How Doctors Think*, NEW YORKER (Jan. 29, 2007), http://www.newyorker.com/magazine/2007/01/29/whats-the-trouble [https://perma.cc/QQB5-SPVJ].

324. *Id*.

325. Edward L. Rubin, *Putting Rational Actors in Their Place*, 51 VAND. L. REV. 1705 (1998).

326. Jim Holt, *Two Brains Running*, N.Y. TIMES BOOK REV. (Nov. 25, 2011) (reviewing DANIEL KAHNEMAN, THINKING, FAST AND SLOW), http://www.nytimes.com/2011/11/27/books/review/thinking-fast-and-slow-by-daniel-kahneman-book-review.html [https://perma.cc/VX99-RVZW].

energy structures, needs, roadblocks, and remedies.[327] In some states, adequate transmission capacity may impede integration of renewable resources. In other states, the cost allocation methodology for transmission access may be the primary roadblock. In some states, utilities may want to develop renewable resources but face regulatory barriers imposed by public utility commissions. In other states, utilities themselves may have erected barriers to limit competition from independent renewable producers. Absent a deeper understanding of the impediments to effective climate change mitigation and energy decarbonization, policymakers who enact fast policies may be providing inadequate, incomplete, or irrelevant solutions to highly complex problems. For example, when Oregon imported its RPS, it sought to support the development of new renewable energy resources, but it failed to recognize that the RPS would not encourage resource diversity or geographic diversity.[328] The resulting concentration of wind resources now threatens the grid with potential instability.[329] Worse than enacting inadequate solutions, as discussed next, fast policies may exacerbate climate change by offering poorly designed remedies that lock in new greenhouse gas emissions.

3. Path Dependency and Stranded Costs

Poorly designed fast policy can create new path dependencies that undermine a state's ability to achieve long-term greenhouse gas emissions reductions.[330] In particular, near-term regulatory and market signals that promote lower-emitting, rather than zero-emitting, technologies can promote investments in new infrastructure and technologies that help "lock in" fossil fuel emissions for decades to come.[331] In the case of natural gas and corn ethanol, they may even promote the use of replacement fuels that actually increase lifecycle greenhouse gas emissions.[332] Finally, short-term signals supporting fossil fuels may spur investment in assets that are likely to become stranded.[333] In an effort to avoid stranded costs, regulators

327. *See supra* Section IV.
328. *See supra* Part IV.
329. *Id.*
330. *See* Mormann, *supra* note 318, at 937–38.
331. Hammond & Rossi, *supra* note 45, at 2; Gregory Unruh, *Understanding Carbon Lock-In*, 28 ENERGY POL'Y 817, 817 (2000).
332. *See* Melissa Powers, *Lessons from U.S. Biofuels Policy: The Renewable Fuels Standard's Rocky Ride*, *in* THE LAW AND POLICY OF BIOFUELS (Yves Le Boutillier et. al. eds., 2016); Steve Weissman, *Natural Gas as a Bridge Fuel: Measuring the Bridge*, CTR. FOR SUSTAINABLE ENERGY 2–10 (Mar. 2016), https://energycenter.org/sites/default/files/docs/nav/policy/research-and-reports/Natural_Gas_Bridge_Fuel.pdf [https://perma.cc/SY7Y-7X3M].
333. Hammond & Rossi, *supra* note 45.

may allow fossil resources to stay online longer, to the detriment of the climate and carbon-free energy sources.

Path dependencies already create significant challenges for regulators trying to grapple with how the energy system will transition away from fossil fuels. The transportation and electricity sectors illustrate the challenges of overcoming path dependencies. Our roads and gas stations were built to accommodate gasoline-fueled vehicles, rather than electric vehicles. Transitioning the vehicle fleet away from fossil resources will almost certainly require passenger vehicles to become fully electric.[334] Today, however, most car buyers are wary of buying electric vehicles due to range anxiety[335] and a perception that they would be sacrificing significant convenience insofar as they would not be able to simply pull up to the nearest gas station. Thus, despite the increased availability of affordable electric vehicles, petroleum-fueled vehicles comprise the vast majority of all new car sales.[336] Sales of new cars send market signals to companies to make new investments. More investments further reinforce the dominant paradigm and tell regulators to delay planning for an electric transportation system and to continue investing in transportation resources that serve gasoline-powered cars. Once along a path of fossil resources, the inertia makes breaking away from the path extremely challenging, as facility designs, supply chains, distribution systems, and customer expectations have solidified around a specific way of doing business.

The path dependencies in the electricity system are perhaps even more challenging to disrupt, due to the monopolistic regulatory system that continues to dominate the United States' electricity sector. The regulatory system that applies to utilities (particularly those in the West, where most utilities remain vertically integrated monopolies) encourages utilities to continue using existing infrastructure as part of the typical "least-cost" rate regulation model.[337] Additionally, fears of losing their monopolies

334. Bryan Lamble, *Of Nesting Dolls and Trojan Horses: A Survey of Legal and Policy Issues Attendant to Vehicle-to-Grid Battery Electric Vehicles*, 86 CHI.-KENT L. REV. 193 (2011).

335. Gary E. Marchant, *Complexity and Anticipatory Socio-Behavioral Assessment of Government Attempts to Induce Clean Technologies*, 61 UCLA L. REV. 1858, 1872–73 (2014).

336. *See, e.g.*, Zachary Shahan, *US Electric Cars Sales Up 44% In November — 1.1% Of US Car Sales!*, CLEAN TECHNICA (Dec. 3, 2016), https://cleantechnica.com/2016/12/03/us-electric-cars-sales-44-november-1-1-us-car-sales/ [https://perma.cc/DE3W-6UQL].

337. Fredrich Kahrl et al., *The Future of Electricity Resource Planning*, LAWRENCE BERKELEY NAT'L LAB., 20–21, 27, 50 (2016), https://emp.lbl.gov/sites/all/files/lbnl-1006269.pdf [https://perma.cc/6SWH-M24H] (discussing how under the typical least-cost

through restructuring of the electricity market provide a disincentive for utilities to invest in transmission assets that could make electricity generation more competitive.[338] To maintain their monopolies, utilities will typically not seek to diversify electricity generation or provide alternative transmission systems that could benefit renewable producers.[339] Thus, path dependencies in the electricity system create particular hurdles for climate change mitigation and energy decarbonization.

In addition, these dynamics can establish new path dependencies when utilities and regulators pursue incremental changes to the energy system, such as when they replace a coal-fired power plant with a natural gas-fired power plant located on the same site. Such a replacement is not unusual; Portland General Electric recently considered doing so for Oregon's last coal-fired power plant.[340] Although using the same site may appear prudent because it will save the utility some costs such as land acquisition outlays and money saved through the ability to repurpose some existing infrastructure, any new investment in infrastructure will almost certainly lock in continued reliance on the new systems. If the site had not previously supported a natural gas facility, for example, the power plant will require access to natural gas through pipelines and storage facilities. Once the natural gas infrastructure is built, it will be easier and more affordable for the utility to build another natural gas-fired power plant in the same vicinity. Even if each new project requires some amount of additional investment, each incremental investment will appear less expensive or risky than the comprehensive infrastructure changes necessary to decarbonize the electricity grid. Policies that allow any investment in new fossil fuel plants, such as Oregon's RPS which allows fossil fuels to produce 50% or more of the state's electricity even beyond 2040, risk enabling utilities to become stuck on a fossil fuel-dependent future.[341]

---

model, load growth historically drove investment in new facilities because existing facilities could not provide enough capacity but that significant changes may require changing the overall model).

338. *See, e.g.*, *Transmission: The Critical Link, Delivering the Promise of Industry Restructuring to Customers*, NAT'L GRID 12 (2005), https://www9.nationalgridus.com/non_html/transmission_critical_link.pdf [https://perma.cc/D57K-QD55] (discussing how regulated utilities lack an incentive to invest in transmission beyond what is necessary for their existing generators to reach their customers).

339. Matthew H. Brown & Richard P. Sedano, *Electricity Transmission: A Primer*, NAT'L COUNCIL ON ENERGY POL'Y 11–12 (2004), https://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/primer.pdf [https://perma.cc/7QZU-UYLH] (explaining how the lack of transmission availability creates "transmission constrained areas" which limit market competition and deter market entrants).

340. *See, e.g.*, Ted Sickinger, *A gassy future? Debate rages over what replaces PGE's Boardman coal plant*, OREGONIAN (Jan. 21, 2017), http://www.oregonlive.com/business/index.ssf/2017/01/debate_heating_up_over_pges_re.html [https://perma.cc/LL67-74UD].

341. *See supra* Part IV.

Finally, as new path dependencies develop, the risks of stranded costs amplify, leading potentially to an even greater dependency on the existing fossil fuel pathway. The regulatory system governing monopolistic electric utilities best illustrates this risk. Under traditional electricity law, electric utilities are entitled to earn a return that enables them to maintain financial integrity and attract capital investors.[342] Regulatory theory states that this arrangement benefits both utilities, by allowing them to earn profits, and ratepayers, who receive affordable electricity service due to the utilities' lower cost of capital.[343] When a utility makes an investment that later fails, the utility is not necessarily entitled to recover from the ratepayers.[344] However, if the utility and its investors alone pay the costs of failed investments, the utility's cost of capital will likely increase, leading to higher rates over time. Thus, it may make sense to charge the ratepayers for the failed investment—except that ratepayers loathe paying for utilities' mistakes and will often rebel politically when they do have to pay.[345] Thus, when faced with the options of (1) charging ratepayers for failed investments or (2) charging utilities and their investors, which will increase rates over time anyway, regulators may look for a third option: keeping unwise investments online and thereby avoiding stranded costs altogether. While this third option may keep utilities and ratepayers satisfied, it can also enable extended reliance on existing fossil resources that should otherwise go offline. Breaking free from the cycle of path dependencies and avoidance of stranded cost avoidance requires careful, long-term, and strategic planning that fast policymaking does not offer.[346]

4. Policy Fatigue

Fast policymaking can, in fact, exhaust political will and thereby impede the type of careful and deliberative planning necessary for climate mitigation and energy decarbonization. Fast climate and energy policies attract support in part because they often promise to provide silver bullet solutions. If lawmakers are asked time and again to revisit a problem that

342. Hammond & Rossi, *supra* note 45, at 8 n.36.
343. *Id.* at 13.
344. *Id.* at 8–9.
345. *See, e.g.*, Ed Joyce, *Ratepayer Group: Proposed Settlement of San Onofre Nuclear Costs 'Theft'*, SOUTHERN CAL. PUB. RADIO (Apr. 7, 2014), http://www.scpr.org/news/2014/04/07/43257/ratepayer-group-proposed-settlement-of-san-onofre/ [https://perma.cc/9WFS-6AGV] (discussing one ratepayer activism battle over a failed nuclear investment in California).
346. Hammond & Rossi, *supra* note 45.

they thought they had solved and must enact round after round of incremental laws to address gaps or loopholes in the regulatory framework, they may push back against the entire policymaking endeavor. This risk is particularly high if some of the fast policies were controversial. To the extent fast policies create a type of policy fatigue that deters lawmakers from pursuing more complex, yet more effective, climate and energy legislation, fast policy can undermine the very objectives it seeks to promote.

5. Increased Legal Risk

Finally, while fast policies can help create legal certainty under some circumstances, they can also increase legal risks in others. As noted above, some states will benefit from legal decisions upholding climate and energy laws enacted by early-moving states.[347] Once a court upholds the law, importing states will be able to rely on that decision in other legal challenges. The reverse, however, is also true: namely, if a state has imported a law from another jurisdiction and a court later invalidates the original law, the importing state's legal framework will also be at risk. Litigation challenging energy and climate laws has accelerated across the United States, and some decisions from the Supreme Court and federal Circuit Courts have called into question the legality of some commonly transferred policies. For example, the Eight Circuit's decision in *North Dakota v. Heydinger*[348] raised the specter that other state laws restricting construction of and new long-term contacts with coal-fired power plants could be invalidated under the Federal Power Act or dormant Commerce Clause. Federal courts have also split regarding the ability of states to protect utilities from the purchase mandate under PURPA, raising questions about many state PURPA laws.[349] Policy mobility has thus made many state laws vulnerable to a domino effect if courts invalidate certain state laws. For states like Oregon that have imported dozens of climate and energy policies,[350] the risk of invalidation threatens much of the state's regulatory structure for the climate and energy sphere.

Stacking the benefits of fast climate and energy policy against the risks suggests that fast policy may sometimes be better than nothing, but it may also undermine climate change mitigation efforts by increasing reliance on newer sources of fossil fuels. Fast policy may also enable enactment of simple and effective laws, but it will not promote the necessary structural

---

347. *See supra* notes 287–97, and accompanying text.

348. *North Dakota v. Heydinger*, 825 F.3d 912, 918 (8th Cir. 2016).

349. *Exelon Wind v. Nelson*, 766 F.3d 380, 383 (5th Cir. 2014) (dismissing a challenge to Texas' implementation of PURPA on the grounds that the court lacked subject matter jurisdiction); *Allco Renewable Energy v. Mass. Elec. Co.*, 208 F. Supp. 3d 390, 398 (D. Mass. 2016) (finding the state's rules invalid).

350. *See supra* note 278 and accompanying text.

changes that are essential to full energy decarbonization and meaningful emissions reductions. In short, fast policy is not adequate to enable society to address climate change.

VI. GETTING OUT OF THE FAST LANE: RECOMMENDATIONS FOR SMARTER CLIMATE AND ENERGY POLICY DESIGNS

As the need to reduce greenhouse gases becomes increasingly urgent, climate and energy policies must become smarter, not faster. Smarter policymaking will require governments to undertake comprehensive assessments of the existing impediments to climate change mitigation and energy decarbonization. Smarter policymaking will then require governments to develop, potentially from the ground-up, comprehensive solutions that overcome the impediments. At the same time, smarter policymaking will require solutions that can both provide certainty, yet remain adaptable as technologies accelerate and market dynamics shift. In short, smarter climate and energy policy must be analytical, creative, deliberative, and adaptive.

To enable smarter climate and energy policy, state governments should look closely at their own governance structures to ensure they have the capacity to engage in smart policymaking. In most cases, smart policies likely cannot originate from the legislative process, due to the lack of expertise in climate and energy policymaking within legislatures and the politicking necessary for specific climate and energy laws to pass. It would be better, therefore, for state legislatures to establish clear legislative mandates requiring greenhouse gas emissions reductions by specified deadlines and to delegate to an expert agency the responsibility for devising a plan for achieving the mandates. Agency expertise is critical to this endeavor, and it may make sense for the legislature to form a new agency structure to ensure that experts in multiple disciplines work together to chart a smarter climate and energy framework.

Legislatures and advocates will undoubtedly continue to be tempted by fast policy solutions. Indeed, as the impacts of climate change become ever clearer and more immediate, a rush to the statehouse for one more silver bullet strategy will be hard to resist. Rather than expend political capital, state resources, and precious time on more fast policies, however, it is time to embrace a smarter and more deliberative approach to climate and energy policymaking.